Appendix VIII: RCA Wetland Delineation Report



RAVALLI COUNTY AIRPORT WETLAND DELINEATION REPORT

February 2005

Prepared For

Ravalli County Commissioners 215 South 4th Street, Suite C Hamilton, Montana 59840

Prepared By

Morrison-Maierle, Inc., Environmental Services Group 901 Technology Boulevard Bozeman, Montana 59718

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Ravalli County Airport Wetland Delineation Map

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EXECUTIVE SUMMARY

At the request of Ravalli County Commissioners, an investigation area within and adjacent to the Ravalli County Airport property, from Golf Course Road to approximately 1,200 feet north of Stock Farm Road, was examined for the presence and extent of wetlands and waterways by Morrison-Maierle, Inc. (MMI) in September 2003 and October of 2004. This wetland delineation has been completed to address potential impacts to wetlands that could occur as a result of expansion of the existing airport facilities.

The Ravalli County Airport is located in portions of Sections 20, 29, and 32, Township 6 North, Range 20 West, Ravalli County, Montana approximately 1 mile east of Hamilton, Montana. The investigation area comprises 1) an approximately 1,800-foot-wide corridor extending from the Golf Course Road north to Tammany Lane, 2) an approximate 1,000-foot-wide corridor east of the existing runway, 3) the airport property west and adjacent to the existing airport structures, 4) the gun range and gravel pit, and 5) an approximately 1,320-foot-wide by 4,320-foot-long area north of the existing runway that extends approximately 1,200 feet north of Stock Farm Road. The preferred construction alternative for the airport expansion identified in the Ravalli County Airport Layout Plan includes construction of a proposed new runway approximately 400 feet to the east of the existing runway, and it is anticipated that all impacts from runway construction will occur within the investigation area (MMI 2003). Therefore, all wetlands and waterways occurring within the investigation area were delineated.

Two separate delineations occurred within the investigation area. The 2003 delineation effort identified fourteen wetlands, but did not examine the entire proposed project impact area identified in the Ravalli County Airport Layout Plan. The purpose of the 2004 delineation was to extend the boundaries of wetlands previously delineated in 2003 to the project impact area boundary and to delineate any wetlands that occur within the investigation area that were not identified in 2003. Six wetland boundaries were extended in 2004 from the previous delineation to the project impact boundary, and four additional wetlands were delineated in 2004. The wetlands that were delineated during both field efforts are identified in Exhibit A.

A total of eighteen wetlands were identified within the Ravalli County Airport investigation area. Utilizing the Hydrogeomorphic Classification System, nine of the wetlands were classified as riverine and nine wetlands were classified as depressional. Two of the nine depressional wetlands appear to be non-jurisdictional. These two wetlands did not connect nor were they adjacent to a known waters of the U.S. All but one of the riverine wetlands delineated appeared to be jurisdictional. Final jurisdictional status and verification of delineated wetland boundaries for all wetlands located within the project area will be provided by the U.S. Army Corps of Engineers. Approximately 45.97 acres of wetland occurs within the investigation area.

1.0 INTRODUCTION

At the request of Ravalli County Commissioners, an investigation area within and adjacent to the Ravalli County Airport property, from Golf Course Road to approximately 1,200 feet north of Stock Farm Road, was examined for the presence and extent of wetlands and waterways by Morrison-Maierle, Inc. (MMI) in September 2003 and October of 2004. The Ravalli County Airport is located in portions of Sections 20, 29, and 32, Township 6 North, Range 20 West, Ravalli County, Montana approximately 1 mile east of Hamilton, Montana. The investigation area comprises 1) an approximately 1,800-foot-wide corridor extending from Golf Course Road north to Tammany Lane, 2) an approximate 1,000-foot-wide corridor east of the existing runway, 3) the airport property west and adjacent to the existing airport structures, 4) the gun range and gravel pit, and 5) an approximately 1,320-foot-wide by 4,320-foot-long area north of the existing runway that extends approximately 1,200 feet north of Stock Farm Road. The site location and specific area of investigation are provided in Figure 1.

Construction of a new runway parallel and approximately 400 feet to the east of the existing runway is the preferred alternative for the proposed airport expansion identified in the Ravalli County Airport Layout Plan (MMI 2003). This proposed alternative would convert the existing runway into the parallel taxiway and a new 75-foot-wide runway would be constructed. The newly proposed runway would be constructed in an area that is currently undeveloped pasture used for grazing, and it is anticipated that all impacts from runway construction will occur within the investigation area. Therefore, all wetlands and waterways occurring within the proposed project development corridor were delineated. The property adjacent to the airport is low-density residential and cultivated agriculture fields. The areas identified by MMI that were determined to exhibit positive indicators for hydrophytic vegetation, wetland hydrology, and hydric soils were delineated as wetland and are described in detail in the following sections.

Two separate delineations occurred within the investigation area. The 2003 delineation effort identified fourteen wetlands, but did not examine the entire proposed project impact area identified in the Ravalli County Airport Layout Plan. The purpose of the 2004 delineation was to extend the boundaries of wetlands previously delineated in 2003 to the project impact area boundary and to delineate any wetlands that occur within the investigation area that were not identified in 2003. Six wetland boundaries were extended in 2004 from the previous delineation to the project impact boundary, and four additional wetlands were delineated in 2004. The wetlands that were delineated during both field efforts are identified in Exhibit A.

2.0 OBJECTIVES

The purpose of this study was to locate areas that meet the criteria for wetlands and non-wetland waterways within the specified investigation area within and adjacent to the Ravalli County Airport property, delineate their boundaries, and provide the results in a final report. A second objective was to provide observations as to the likely jurisdictional status of the delineated wetlands and non-wetland waterways based on their connection or adjacency to a known waters of the U.S.

The jurisdictional observations made during the course of the delineation effort are considered preliminary and are based on conditions observed in the field and/or during the off-site review, as well as interpretation of current guidelines. Final jurisdictional status will require concurrence from the U.S. Army Corps of Engineers (USACE). Jurisdictional determination criteria are discussed in more detail in Section 3.2.3.

3.0 METHODS

The wetland delineation for this project was based on the methodology developed by the USACE and other federal agencies, for implementation of Section 404 of the Clean Water Act. The investigation consisted of an off-site review of existing site-specific information and completion of an on-site inspection using the Routine Level 2 Determination Method outlined in the 1987 USACE Wetlands Delineation Manual (Environmental Laboratory 1987).

3.1 OFF-SITE REVIEW

A preliminary off-site review was completed to identify potential wetland areas and non-wetland waterways within the project corridor. The source documents used for this review included the U.S. Geological Survey (USGS) Mountain House (1964), Hamilton North (1967), Hamilton South (1964), and Corvallis (1967) 7.5' Topographic Maps, the applicable portion of these maps are provided as Figure 1; the aerial photograph of the project corridor (MMI 1999), provided as Figure 2; the Ravalli County Soil Survey Map (USDA 1959), provided as Figure 3; and the National Wetlands Inventory (NWI) Map, provided as Figure 4.

3.2 ON-SITE REVIEW

Wetlands were identified on-site (using the Level 2 Routine Wetland Determination Method) as areas that met the standard criteria for hydrophytic vegetation, hydric soils, and wetland hydrology. The wetland criteria for each of the above three parameters is discussed in greater detail in Section 3.2.1. Using this method, these three parameters were evaluated at sample points (S) along linear transects to determine the boundary between upland and wetland areas. If a sample point exhibited positive wetland indicators for all three parameters, a positive wetland determination is made for the area represented by the sample point. If any sample point failed to exhibit a positive indicator for one or more parameters, the area is determined to be non-wetland per the 1987 USACE Wetland Delineation Manual. The areas that were determined to be wetland (W) that occurred within the project corridor were marked with pin flags, surveyed, and mapped. The locations of all delineated wetlands are provided on the Wetland Delineation Map included as Exhibit A. Two separate delineations occurred within the investigation area. The 2003 delineation effort identified fourteen wetlands, but did not examine the entire proposed project impact area identified in the Ravalli County Airport Layout Plan. These wetlands delineated in 2003 are identified on Exhibit A and in this report as "03" wetlands. The purpose of the 2004 delineation was to extend the boundaries of wetlands previously delineated in 2003 to the project impact area boundary and to delineate any wetlands that occur within the investigation area that were not identified in 2003. Six wetland boundaries were extended in 2004 from the previous delineation to the project impact boundary, and four addition wetlands were delineated in 2004. These wetlands are labeled as "04" wetlands. Many of the wetland boundaries extended beyond the project corridor. Where wetlands extended beyond the investigation area, an arrow has been provided on the Wetland Delineation Map, showing the location and the direction in which the wetland continues.

3.2.1 Hydrophytic Vegetation, Hydric Soils, and Wetland Hydrology

The following is a discussion of the wetland indicators for each of the three parameters (vegetation, soils, and hydrology) examined in the field when utilizing the Level 2 Routine Wetland Determination Method. Under most circumstances, a positive wetland indicator must be identified for each of the three parameters in order for an area to be determined to be wetland.

Hydrophytic Vegetation

Plants must be physiologically or morphologically adapted for life under saturated or anaerobic soil conditions to grow in wetlands. The USACE and the U.S. Fish and Wildlife Service (USFWS) have determined the estimated probability of each plant species occurrence in wetlands and have assigned an "indicator" status to each species to reflect their findings. Accordingly, plants may be categorized as obligate (OBL), facultative wetland (FACW), facultative (FAC), facultative upland (FACU), upland (UPL), and no indicator assigned (NI). Species with an indicator status of OBL, FACW, or FAC are considered adapted for life in saturated or anaerobic soil conditions. A sample plot is considered to meet the hydrophytic vegetation criterion if more than 50 percent of dominant species present have an indicator status of OBL, FACW, or FAC.

Hydric Soils

Hydric soils are defined as soils that are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper part of the soil profile (Environmental Laboratory 1987). Soil is saturated when all voids (pores) between soil particles are filled with water.

Hydric soils exhibit certain physical characteristics that can be observed in the field. These characteristics, or indicators, include high organic content, accumulation of sulfides, greenish or bluish gray color (gley formation), mottling, and dark soil colors (low soil chroma). Organic content is estimated visually and texturally, sulfidic material is determined by the odor of sulfide gases, and soil colors are determined by using *Munsell Soil Color Charts* (Munsell Color 2000). A sample plot is considered to meet the hydric soil criterion if one or more of the above indicators or other hydric soil indicators as specified in the 1987 USACE Wetlands Delineation Manual are present.

Wetland Hydrology

The technical guidelines for the wetland hydrology parameter have been established as soils that are periodically inundated or saturated to the surface at some time during the growing season (Environmental Laboratory 1987). Wetland hydrology may be supplied by surface water, groundwater, and/or direct precipitation. Sites are examined for visual indicators of wetland hydrology such as current ponding or soil saturation, previous inundation or saturation, and observable drainage patterns. A sample plot is considered to meet the wetland hydrology criterion if at least one primary indicator or two secondary indicators are present.

3.2.2 Non-Wetland Waterways

Non-wetland waterways are identified as having either perennial or intermittent flow as evidenced by the presence of a defined channel with bed and bank or a streambed dominated by hydrophytic vegetation. These non-wetland waterways may be considered isolated or jurisdictional depending on adjacency to or the existence of a surface hydrologic connection to a known waters of the U.S.

3.2.3 Jurisdictional Determination

The observed jurisdictional status of wetlands and non-wetland waterways was determined through visual documentation of a surface hydrological connection to a known waters of the U.S. Final jurisdictional status for all wetlands and waterways located within the project area will be provided by the USACE.

3.2.4 Data Collection

Vegetation, soils, and hydrology were documented at representative locations along the wetland-upland boundary. Data were recorded for at least one sample point on both the upland and wetland sides of the wetland boundary along a linear transect. Copies of USACE data sheets are provided in Appendix A. Sample points were documented and representative photographs of the project area were taken. The following is the sampling, data collection, and data recording methodology for each of the three wetland parameters (vegetation, soils, and hydrology) as well as for sample point documentation.

Vegetation Data

At each sample point, plant species dominance was estimated based on the percent areal or basal coverage within a 30-foot radius for the tree and shrub layers and a 10-foot radius for the herbaceous layer within the community type being sampled. Plants were identified using standard regional plant keys. Taxonomy was based on *Vascular Plants of Montana* (Dorn 1984). Indicator status of plant species was taken from the *National List of Plant Species That Occur in Wetlands for Region 9-Northwest* (Resource Management Group 1993) and the *1993 Supplement to the List of Plant Species that Occur in Wetlands: Northwest (Region 9)* (Reed 1993).

Soil Data

At each sample point soils were characterized to a minimum depth of 16 inches when possible. At times, excessively rocky soils may prevent this depth of excavation. Munsell Soil Color Charts and standard soil texturing methodology were used to describe the soil profile.

Hydrology Data

At each sample point, hydrology was typically determined based on factors such as depth to free water in soil test pits, inundation, soil saturation in the upper 12 inches, or observable drainage patterns within the wetland.

Photo and Sample Data Point Documentation

Sample points were marked in the field with pin flags. Each sample point was then assigned a number that corresponded to the wetland being documented, and this number was written on the sample point flags. Sample points were then surveyed. Representative photographs of the wetland and associated upland areas were taken with the location and a description of the scene recorded on a field photo log sheet. Copies of digital photographs are provided in Appendix B.

3.3 WETLAND CLASSIFICATION

Wetlands were classified using the Hydrogeomorphic (HGM) classification system. This system classifies Montana wetlands as riverine, slope, depressional, mud flats, or lacustrine (Smith 1995). A brief description of each wetland type is presented below.

- Riverine wetlands include wetlands associated with waterway/drainage systems. These can be perennial or intermittent streams or rivers and/or their immediately adjacent wetlands.
- Slope wetlands include wetlands that are typically associated with groundwater seepage. This seepage usually persists and saturates the soil throughout the growing season but typically does not form a defined channel. Seepage slopes may convey water to a waters of the U.S. and therefore, would be considered jurisdictional. However, water in these wetlands may influence only a limited area and are often isolated and therefore, would be considered non-jurisdictional.
- **Depressional** wetlands include wetlands that typically form in isolated depressions such as glacial potholes. Hydrology for these wetlands may either be supplied by groundwater seepage or surface water from the surrounding watershed. Typically, these wetlands have no definable inlet or outlet.
- **Mud flats** include both mineral flats such as playas and organic flats such as expansive peat lands.
- Lacustrine wetlands include both wetlands immediately adjacent to large water bodies as well as the water body itself. In order to qualify as a lacustrine wetland, the water body must exceed 2 meters in depth, or the wetland is classified as depressional.

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3.4 PERENNIAL DRAINAGES

Perennial drainages, or streams, flow continuously and they are generally fed in part by springs. Surface water elevations are commonly lower than the water table elevation in adjacent soils (Hansen et al. 1995). Existing data, such as USGS topographic maps and Natural Resource Conservation Service (NRCS) soil survey maps, were reviewed to identify documented perennial drainages.

4.0 RESULTS

The wetland delineation completed by MMI consisted of reviewing existing site-specific information and completing an on-site inspection with sampling using the Level 2 Routine Determination Method outlined in the 1987 USACE Wetlands Delineation Manual. The delineation effort consisted of a preliminary off-site investigation of available information and an on-site investigation that consisted of two separate pedestrian surveys of the investigation area and delineation of individual wetlands and waterways. A total of eighteen wetlands were identified within the Ravalli County Airport project area.

4.1 OFF-SITE REVIEW

A preliminary off-site review was completed of the USGS Mountain House, Hamilton North, Hamilton South, and Corvallis 7.5' Topographic Maps, provided as Figure 1; an aerial photograph of the project site, provided as Figure 2, the Soil Survey of Ravalli County, Montana, provided as Figure 3; and the National Wetlands Inventory Map of the area, provided as Figure 4.

4.1.1 USGS Topographic Map

The Mountain House (1964), Hamilton North (1967), Hamilton South (1964), and Corvallis (1967), Montana USGS 7.5' Topographic Maps show residential areas to the southwest of the Ravalli County Airport with Gird Creek, Hedge Ditch, and one unnamed drainage crossing the airport property within the investigation area. The unnamed western most drainage was delineated as W-1-03 and W-2-03, and continues off the property as W-12-03. This drainage appears to be a lateral of the Hedge Ditch. The northern most drainage is Gird Creek, and its fringe wetland was delineated as W-4-03/W-4-04. The southern most drainage within the investigation area is identified on the topographic map as Hedge Ditch, a lateral of Gird Creek, which was delineated as W-15-04. Other features evident in the topographic map are the airport runway and structures, and the gravel pit near the entrance to the airport at the turn off from the East Side Highway. The topographic maps indicate relatively flat topography throughout the investigation area and the lack of dense vegetation.

4.1.2 Aerial Photograph

The aerial photograph of the project site shows that the majority of the site is open agricultural land with low-density residential areas to the southwest of the Ravalli County Airport property (MMI 1999). Several drainages are evident on the photograph identified by dark linear areas and were delineated as W-1-03/W-1-04, W-2-03, W-3-03, W-4-03/W-4-04, W-8-03/W-8-04, W-11-03, W-12-03, and W-15-04. Other areas with dark shading that appear on the photograph were delineated as depressional wetlands W-5-03, W-6-03/W-6-04, W-7-03/W-7-04, W-9-03, W-10-03, W-13-03, W-16-04, and W-18-04. Dry drainages are visible on the aerial photograph to the east of the existing runway and are depicted by dark linear areas. On-site review concluded that these areas did not contain wetland vegetation or defined bed and bank. Therefore, these drainages were not delineated as wetlands.

4.1.3 Soil Survey Map

According to the Soil Survey of Ravalli County, Montana, four soil map units (representing those areas where sample points were located within delineated wetlands) occur within the investigation area boundary that contain hydric soil components. The map unit Corvallis silt loam, poorly drained variant (C3r), 0 to 2 percent slopes, contains 90 percent of the Corvallis poorly drained variant component, which is a hydric soil. The map unit Corvallis silt loam, slightly saline (C3s), 0 to 2 percent slopes, contains 10 percent of the poorly drained soils component, which is a hydric soil. The map unit Corvallis silt loam, moderately saline (C3t), 0 to 2 percent slopes, contains 5 percent of the poorly drained soils component, which is a hydric soil. The map unit Corvallis silt loam, moderately shallow, slightly saline (C3v), 0 to 2 percent slopes, contains 5 percent of the poorly drained soils component, which is a hydric soil.

The non-hydric soil map units that occur within the investigation area boundary which represent those areas where sample points were located within delineated wetlands include: Burnt Fork loam (B3f), 0 to 2 percent slopes; Granstsdale loam (G2n), 0 to 2 percent slopes; Riverside cobbly sandy loam (Rm), 2 to 5 percent slopes; and Slocum loam (S2k), 0 to 2 percent slopes. Wetlands were delineated in areas designated on the Soil Survey Map of Ravalli County as having both hydric and non-hydric soils. A list of all hydric and non-hydric soil map units located within the proposed project corridor that represent sample point locations are provided in Table 4.1. The NRCS is currently updating soils information for the Bitterroot Valley; soil data for this area may be updated as a result of the new survey.

Table 4.1 Soil map units occurring within the project investigation area at sample points.

Map Unit Symbol	Map Unit Name	Percent Slope
C3r	Corvallis silt loam, poorly drained variant	0 to 2
C3s	Corvallis silt loam, slightly saline	0 to 2
C3t	Corvallis silt loam, moderately saline	0 to 2
C3v	Corvallis silt loam, moderately shallow, slightly saline	0 to 2
B3f	Burnt Fork loam, level	0 to 2
G2n	Grantsdale loam, level	0 to 2
Rm	Riverside cobbly sandy loam, sloping	2 to 5
S2k	Slocum loam, slightly saline	0 to 2

4.1.4 National Wetlands Inventory Map

The NWI Map indicates two wetlands present within project area. The two mapped wetlands are illustrated on Figure 4. A palustrine, emergent, temporarily flooded wetland occurs north and east of the existing runway and is the fringe wetland associated with Gird Creek that was delineated as W-4-03. The other wetland occurring in the project area identified by the NWI Map is a palustrine, emergent, seasonally flooded wetland, diked/impounded wetland. This wetland was delineated as W-13-03.

4.2 ON-SITE REVIEW

A total of eighteen wetland area and waterways were identified and delineated within the investigation area (Exhibit A). Two separate delineation efforts took place, one in September of 2003, and one in October of 2004. The wetland delineation boundaries provided on Exhibit A are labeled to correspond to the date of the field investigation. Several wetland boundaries were extended in 2004 from the mapping of the 2003 delineation. Utilizing the HGM classification system, nine wetlands were classified as riverine and nine were classified as depressional. Descriptions of the wetlands as well as their potential jurisdictional status are provided below.

4.2.1 Riverine Wetlands

Riverine wetlands include waterways or drainage systems along with their immediately adjacent wetlands. Nine riverine wetlands were delineated within the project site including wetlands W-1-03/W-1-04, W-2-03, W-3-03, W-4-03/W-4-04, W-8-03/W-8-04, W-11-04, W-12-03, W-14-03, and W-15-04. One stream, Gird Creek, located approximately 200 feet north of the existing runway along the base of a topographic bench was identified during this review. The riverine fringe wetland and depressional wetland meadow associated with Gird Creek were delineated as W-4-03/W-4-04. Wetland W-1-03/W-1-04 is a typical riverine wetland within the project area that will be described below.

Wetland W-1-03/W-1-04 is located within the southern portion of the investigative area south of Tammany Lane and flows north and connects to W-2-03 across Tammany Lane via culvert. Wetland W-1-03/W-1-04 was observed to be a jurisdictional water of the U.S., due to the existence of a surface hydrologic connection to the Bitterroot River. The dominant wetland vegetation included Nebraska sedge (*Carex nebrascensis*, OBL), common monkey flower (*Mimulus guttatus*, OBL), tufted hairgrass (*Deschampsia cespitosa*, FACW), hairy willowherb (*Epilobium cilliatum*, FACW-), reed canarygrass (*Phalaris arundinacea*, FACW), American mannagrass (*Glyceria grandis*, No status), and curly dock (*Rumex crispus*, FAC+). Hydrology indicators included saturated soils in the upper 12 inches, drainage pattern in the wetland, and the FAC-Neutral Test. The hydric soil was a low chroma color (10YR 2/1). The wetland/upland boundary followed a change in vegetation from Nebraska sedge, common monkey flower, tufted hairgrass, hairy willowherb, reed canarygrass, American mannagrass, and curly dock in the wetland to slender wheatgrass (*Agropyron trachycaulum*, FAC), prickly lettuce (*Lactuca serriola*, FACU), common tansy (*Tanacetum vulgare*, NI), and alfalfa (*Medicago sativa*, No status) in the upland.

4.2.2 Depressional Wetlands

Depressional wetlands include wetlands that typically form in topographic depressions and other low-lying areas. Hydrology for these wetlands may either be supplied by groundwater seepage, surface water from the surrounding watershed, or a combination of the two. Nine wetlands were classified as depressional. Two of the nine depressional wetlands, W-13-03 and W-16-04, appeared to be isolated and are likely to be non-jurisdictional. Seven depressional wetlands, W-5-03, W-6-03/W-6-04, W-7-03/W-7-04, W-9-03, W-10-03/W-10-04, W-17-04, and W-18-04 appeared to connect with W-4-03/W-4-04, the fringe wetland associated with Gird Creek and are likely jurisdictional.

Wetland W-6-03 is a typical depressional wetland within the project area. This wetland is located east of the existing runway area and exhibits a hydrological connection to W-3-03 (a riverine ditch) that eventually connects to W-4-03/W-4-04 the fringe wetland associated with Gird Creek. The dominant wetland vegetation included Nebraska sedge, tufted hairgrass, curly dock, Baltic rush (*Juncus balticus*, FACW+), reed canarygrass, and smooth scouring-rush (*Equisetum laevigatum*, FACW). The hydrology indicators included drainage patterns in the wetland and the FAC-Neutral Test. The hydric soil was a low chroma color (10YR 3/1). The wetland/upland boundary followed a change in vegetation from Nebraska sedge, tufted hairgrass, curly dock, Baltic rush, reed canarygrass, and smooth scouring-rush in the wetland to snowberry (*Symphoricarpos albus*, FACU), Woods rose (*Rosa woodsii*, FACU), and musk thistle (*Carduus nutans*, No status) in the upland.

Table 4.2 provides a list of the delineated wetlands and their wetland type as well as the observed preliminary jurisdictional status. Final jurisdictional status on all wetlands will be provided by the USACE. Wetlands with the same wetland number but with both an "03" and "04" extension were extended during the 2004 delineation field investigation.

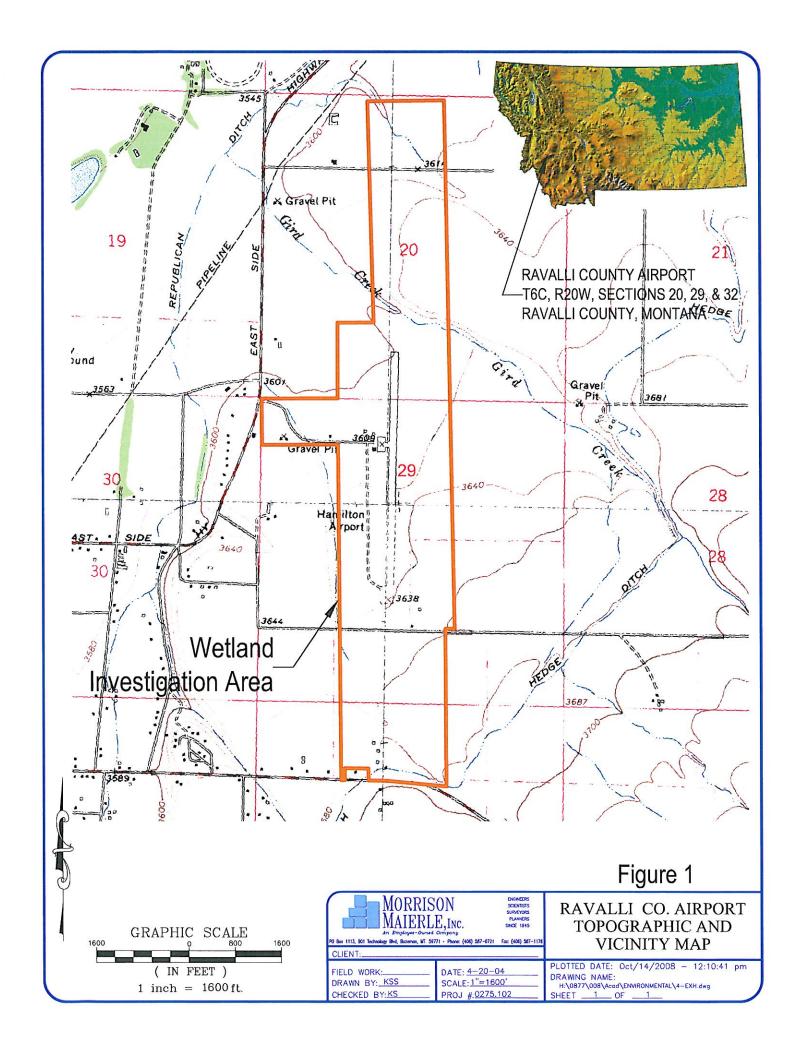
Table 4.2 Wetland Information

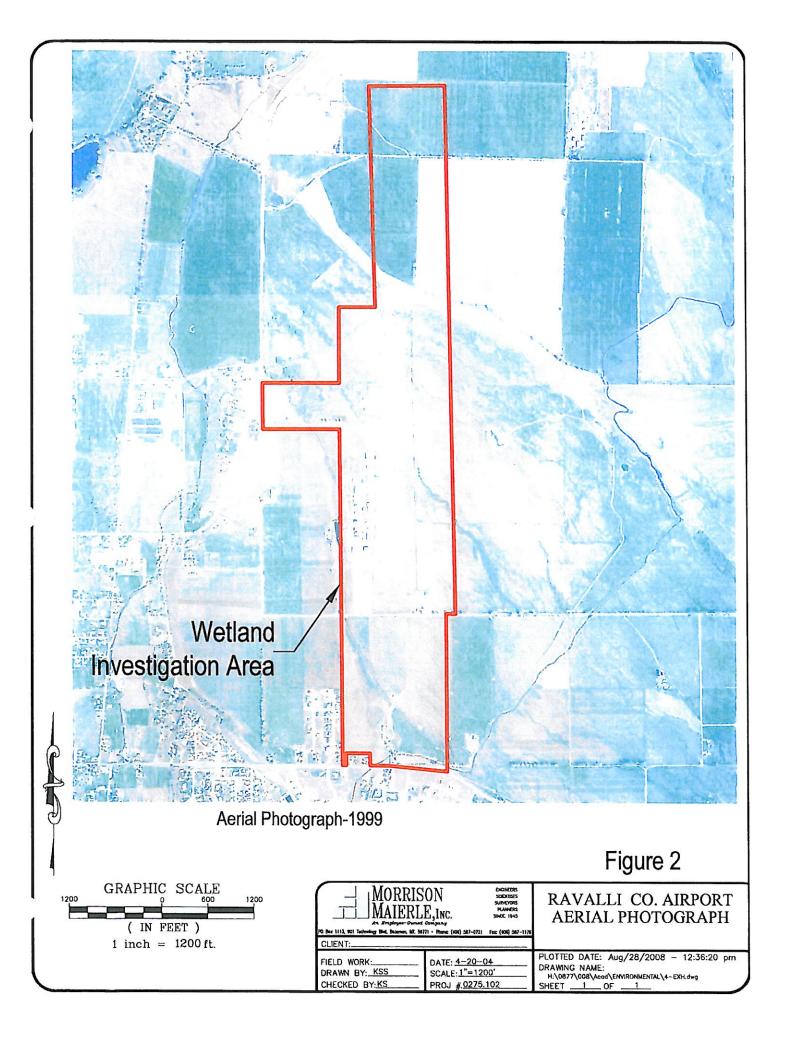
WETLAND	WETLAND TYPE	OBSERVED PRELIMINARY JURISDICTIONAL STATUS	ACRES
W-1-03/	Riverine	Yes	5.36
W-1-04			
W-2-03	Riverine	Yes	6.26
W-3-03	Riverine	Yes	1.38
W-4-03/	Riverine	Yes	18.90
W-4-04			
W-5-03	Depressional	Yes	0.05
W-6-03/	Depressional	Yes	0.69
W-6-04			
W-7-03/	Depressional	Yes	0.37
W-7-04			
W-8-03/	Riverine	Yes	0.36
W-8-04			
W-9-03	Depressional	Yes	0.10
W-10-03/	Depressional	Yes	9.37
W-10-04			
W-11-03	Riverine	Yes	0.12
W-12-03	Riverine	Yes	1.31
W-13-03	Depressional	No	0.33
W-14-03	Riverine	No	0.13
W15-04	Riverine	Yes	0.83
W-16-04	Depressional	No	0.10
W-17-04	Depressional	Yes	0.07
W-18-04	Depressional	Yes	0.24

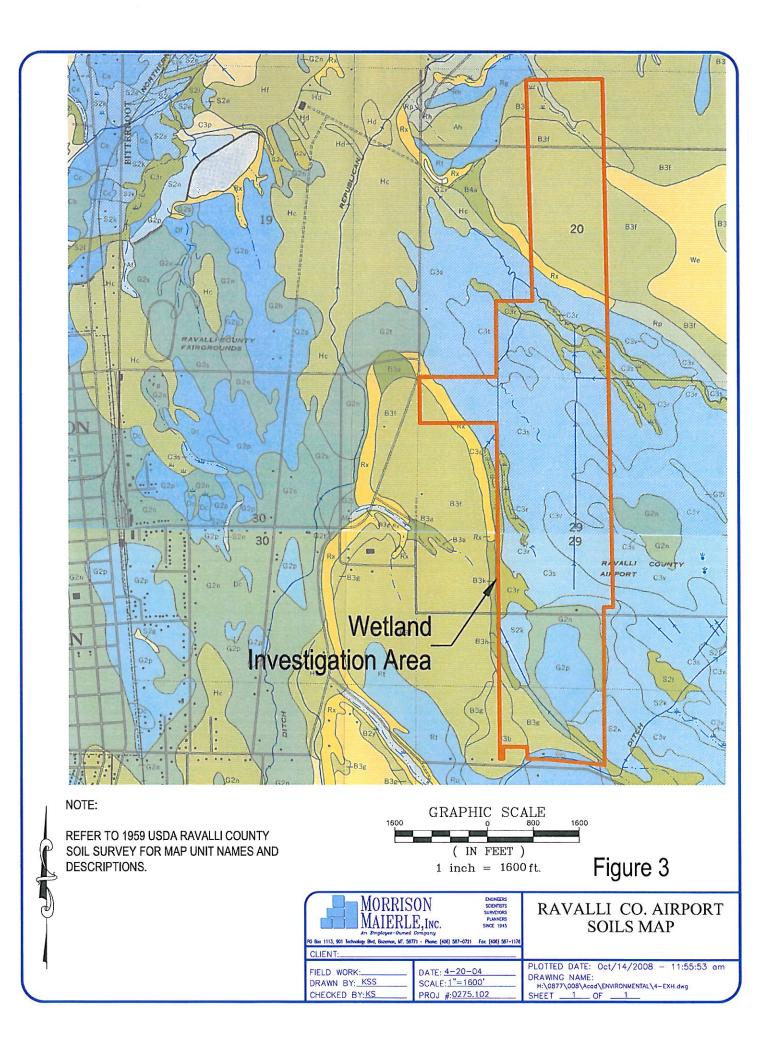
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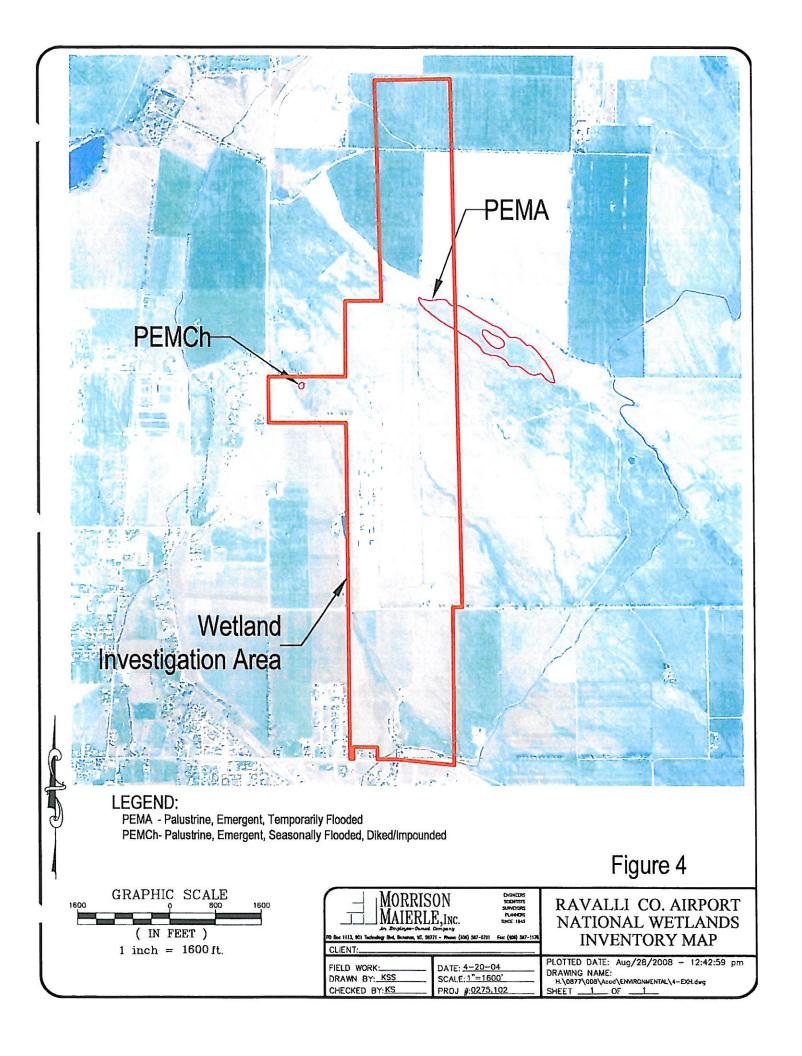
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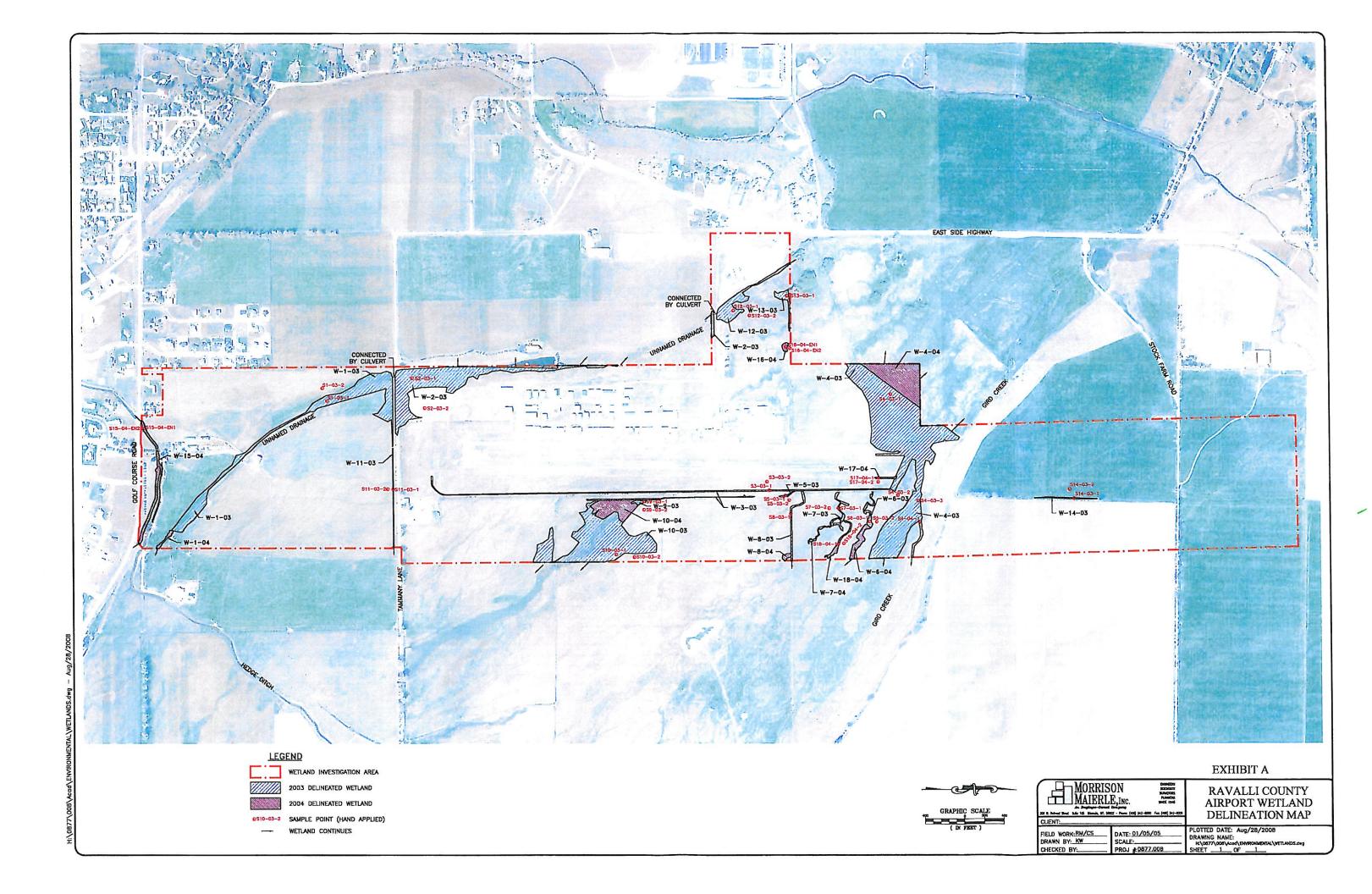
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- Smith, R.D., Ammann, A., Bartoldus, C., and Brinson, M.M. 1995. An approach for assessing wetland functions using hydrogeomorphic classification, reference wetlands, and functional indices. Technical Report WRP-DE-9, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.
- U.S. Department of Agriculture Natural Resources Conservation Service. Montana Agriculture Experiment Station. 1959. Soil Survey of Ravalli County Area, Montana.
- U.S. Geological Survey. 1964. Hamilton South, Montana 7.5' Topographic Map.
- U.S. Geological Survey. 1964. Mountain House, Montana 7.5' Topographic Map.
- U.S. Geological Survey. 1967. Corvallis, Montana 7.5' Topographic Map.
- U.S. Geological Survey. 1967. Hamilton North, Montana 7.5' Topographic Map.











APPENDIX A USACE Data Sheets

Job Number: 0877.008.010.0310

City: Hamilton

Wetland Data Point: W-1-03-wl.

Project/Site: Ravalli Co. Airport Applicant/Owner: Ravalli County Investigator: SR/EN [X] Do normal circumstances exist on the site? [] Have vegetation, soils, or hydrology been disturbed [] Is the area a potential problem area? Vegetation	1?	Date: October 28, 2004 County: Ravalli State: MT Community ID: Wetland Station ID: S-1-03 Plot ID: 1	
Dominant Species	Common Name	% Cover	Indicator
Herbaceous Juncus ensifolius Cirsium arvense Geranium richardsonii Rumex crispus Glyceria grandis Phalaris arundinacea Epilobium ciliatum Deschampsia cespitosa Mimulus guttatus Carex nebrascensis Phleum pratense % Species that are OBL, FACW, or FAC (except FAC-Remarks: Greater than 50% FAC or wetter	Rush,Three-Stamen Thistle,Creeping Crane's-Bill,Richardson's Dock,Curly Grass,American Manna Grass,Reed Canary Willow-Herb,Hairy Hairgrass,Tufted Monkey-Flower,Common Larg Sedge,Nebraska Timothy		FACW FACU+ FAC- FAC+ No status FACW FACW- FACW OBL OBL FAC-
Hydrology Prin	nary Wetland Hydrology Indicator	rs Secondary Hydrology	Indicators
[] Recorded Data (describe in remarks) [[] Stream, Lake, or Tide Gage [] [] Aerial Photograph [] [] Other (describe in remarks) [] Field Observations:] Inundated X] Saturated in upper 12 inches] Water marks] Drift lines] Sediment deposits X] Drainage patterns in wetlands	[] Oxidized root of [] Water-stained [] Local soil surve [X] FAC-Neutral te [] Other (explain	channels leaves ey data est
Soils			
Depth Hor. Matrix Mottle / 2nd Mottle (in.) Color Color		exture, ructure, etc.	
0-12 A 10YR 3/1	Marie Company of the	andy Loam Fine Subangular Bl	ocky
Hydric Soils Indicators [] Histosol [] Histic Epipedon [] Sulfidic Odor [] Probable Aquatic Moist Regime [] Reducing Conditions [X] Gleyed or Low-Chroma Colors	[] Concretions [] High Organic % in St [] Organic Streaking [] Listed on Local Hydri [] Listed on National Hy [] Other (explain in rem	ic Soils List ydric Soils List	
Unit Name: S2k Slocum loam slightly saline Drainage Class: Moderately well drained	Taxonomy: Ustic Torrifluve [] Field Observations mate		
Remarks			
Wetland Determination			
[X] Hydrophytic Vegetation Present[X] Hydric Soils Present[X] Wetland Hydrology PresentRemarks	[X] This Data Point is a \	Wetland	

Job Number: 0877.008.010.0310 **Data Form** City: Hamilton Routine Wetland Determination Wetland Data Point: W-1-03-upl. Project/Site: Ravalli Co. Airport Date: October 28, 2004 Applicant/Owner: Ravalli County County: Ravalli Investigator: SR/EN State: MT [X] Do normal circumstances exist on the site? Community ID: Upland [] Have vegetation, soils, or hydrology been disturbed? Station ID: S-1-03 [] Is the area a potential problem area? Plot ID: 2 Vegetation Dominant Species Common Name % Cover Indicator **Herbaceous** Tansy,Common Tanacetum vulgare Lactuca serriola **FACU** Lettuce, Prickly Medicago sativa Alfalfa No status Agropyron trachycaulum Wheatgrass, Slender FAC % Species that are OBL, FACW, or FAC (except FAC-): Cowardin Classification: Remarks: Less than 50% FAC or wetter Hydrology Primary Wetland Hydrology Indicators Secondary Hydrology Indicators [] Recorded Data (describe in remarks) [] Inundated [] Oxidized root channels [] Stream, Lake, or Tide Gage [] Saturated in upper 12 inches [] Water-stained leaves [] Aerial Photograph [] Water marks [] Local soil survey data [] Other (describe in remarks) [] Drift lines [] FAC-Neutral test [] Sediment deposits [] Other (explain in remarks) Field Observations: [] Drainage patterns in wetlands Depth of Surface Water(in.): 0 Depth to Free Water in Pit(in.): >16 Depth to Saturated Soils(in.): >16 Remarks Soils Depth Hor. Matrix Mottle / 2nd Mottle Texture, (in.) Color Abundance Structure, etc. 0 - 1710YR 3/3 Sandy Loam Fine Subangular Blocky Hydric Soils Indicators [] Histosol [] Concretions [] Histic Epipedon [] High Organic % in Surface Layer [] Sulfidic Odor [] Organic Streaking [] Probable Aquatic Moist Regime [] Listed on Local Hydric Soils List [] Reducing Conditions [] Listed on National Hydric Soils List [] Gleyed or Low-Chroma Colors [] Other (explain in remarks) Unit Name: S2k Slocum loam slightly saline Taxonomy: Ustic Torrifluvents Drainage Class: Moderately well drained [] Field Observations match map

Wetland Determination

- [] Hydrophytic Vegetation Present
- [] Hydric Soils Present
- [] Wetland Hydrology Present

Remarks

Remarks

[] This Data Point is a Wetland

Job Number: 0877.008.010.0310

City: Hamilton

Wetland Data Point: W-2-03-wl.

Project/Site: Ravalli Co. Airport Applicant/Owner: Ravalli County Investigator: SR/EN [X] Do normal circumstances exist on the site? [] Have vegetation, soils, or hydrology been distu [] Is the area a potential problem area?	rbed?	Date: October 28, 2004 County: Ravalli State: MT Community ID: Wetland Station ID: S-2-03 Plot ID: 1
Vegetation		
Dominant Species	Common Name	% Cover Indicator
Herbaceous Cirsium arvense Equisetum laevigatum Equisetum arvense Deschampsia cespitosa Phalaris arundinacea Carex nebrascensis Shrub	Thistle,Creeping Scouring-Rush,Smooth Horsetail,Field Hairgrass,Tufted Grass,Reed Canary Sedge,Nebraska	FACU+ FACW FAC FACW FACW OBL
Salix spp.	Willow spp.	NI, OBL-FAC
% Species that are OBL, FACW, or FAC (except F. Remarks: Greater than 50% FAC or wetter	AC-): Co	owardin Classification:
Hydrology	Primary Wetland Hydrology Indicato	ors Secondary Hydrology Indicators
[] Recorded Data (describe in remarks)	[] Inundated	Osidized root channels
[] Stream, Lake, or Tide Gage	Saturated in upper 12 inches	
[] Aerial Photograph	[] Water marks	[] Local soil survey data
[] Other (describe in remarks)	Drift lines	[X] FAC-Neutral test
	Sediment deposits	[] Other (explain in remarks)
Field Observations:	[X] Drainage patterns in wetland	
Depth of Surface Water(in.): 0 Depth to Free Water in Pit(in.): >16 Depth to Saturated Soils(in.): >16 Remarks		
Soils		
	-10-	'autural
Depth Hor. Matrix Mottle / 2nd Mottle (in.) Color Color		exture, structure, etc.
0-12 A 10YR 3/1 12-16 A 7.5YR 2.5/1	S	andy Loam Fine Subangular Blocky Silty Clay Coarse Subangular Blocky
Hydric Soils Indicators [] Histosol [] Histic Epipedon [] Sulfidic Odor [] Probable Aquatic Moist Regime [] Reducing Conditions [X] Gleyed or Low-Chroma Colors	[] Concretions [] High Organic % in S [] Organic Streaking [] Listed on Local Hyo [] Listed on National I [] Other (explain in re	dric Soils List Hydric Soils List
Unit Name: C3r Corvallis silt loam poorly drain Drainage Class: Very poorly drained	ned var. Taxonomy: Typic Haplac [] Field Observations ma	
Remarks		
Wetland Determination	-	
[X] Hydrophytic Vegetation Present[X] Hydric Soils Present[X] Wetland Hydrology PresentRemarks	[X] This Data Point is a	a Wetland

Job Number: 0877.008.010.0310

City: Hamilton

Wetland Data Point: W-2-03-upl.

Project/Site: Ravalli Co. Airport Applicant/Owner: Ravalli County Investigator: SR/EN [X] Do normal circumstances exist on the site? [] Have vegetation, soils, or hydrology been disturbed [] Is the area a potential problem area? Vegetation Dominant Species Herbaceous Tanacetum vulgare Lactuca serriola Agropyron trachycaulum Cynoglossum officinale Shrub Symphoricarpos albus % Species that are OBL, FACW, or FAC (except FAC-Remarks: Less than 50% FAC or wetter	Common Name Tansy,Common Lettuce,Prickly Wheatgrass,Slender Houndstongue Snowberry	Date: October 28, 2004 County: Ravalli State: MT Community ID: Upland Station ID: S-2-03 Plot ID: 2 **Cover Indicator* NI FACU FAC FACU FACU FACU Wardin Classification:
[] Recorded Data (describe in remarks) [[] Stream, Lake, or Tide Gage [[] Aerial Photograph [[] Other (describe in remarks) [pary Wetland Hydrology Indicator] Inundated] Saturated in upper 12 inches] Water marks] Drift lines] Sediment deposits] Drainage patterns in wetlands	 [] Oxidized root channels [] Water-stained leaves [] Local soil survey data [] FAC-Neutral test [] Other (explain in remarks)
Soils	<u> </u>	
Depth Hor. Matrix Mottle / 2nd Mottle (in.) Color Color		xture, ructure, etc.
0-14 A 10YR 3/1	Sa	ndy Clay Loam Medium Subangular Blocky
Hydric Soils Indicators [] Histosol [] Histic Epipedon [] Sulfidic Odor [] Probable Aquatic Moist Regime [] Reducing Conditions [X] Gleyed or Low-Chroma Colors	[] Concretions [] High Organic % in S [] Organic Streaking [] Listed on Local Hydr [] Listed on National H [] Other (explain in ren	ic Soils List ydric Soils List
Unit Name: C3r Corvallis silt loam poorly drained Drainage Class: Very Poorly drained	var. Taxonomy: Typic Haplaqu	
Remarks		
Wetland Determination [] Hydrophytic Vegetation Present [] Hydric Soils Present [] Wetland Hydrology Present Remarks	[] This Data Point is a	Wetland

Job Number: 0877.008.010.0310

City: Hamilton

Wetland Data Point: W-3-03-wl.

Project/Site: Ravalli Co. Airport Applicant/Owner: Ravalli County Investigator: SR/EN [X] Do normal circumstances exist on the site? [] Have vegetation, soils, or hydrology been di [] Is the area a potential problem area? Vegetation Dominant Species Herbaceous Epilobium ciliatum Carex nebrascensis Phalaris arundinacea Shrub	Sturbed? Common Name Willow-Herb,Hairy Sedge,Nebraska Grass,Reed Canary	Date: October 28, 2004 County: Ravalli State: MT Community ID: Wetland Station ID: S-3-03 Plot ID: 1	Indicator FACW- OBL FACW
Salix spp. % Species that are OBL, FACW, or FAC (exception Remarks: Greater than 50% FAC or wetter	Willow spp. Ot FAC-): Co	wardin Classification:	NI, OBL-FAC
Hydrology [] Recorded Data (describe in remarks) [] Stream, Lake, or Tide Gage [] Aerial Photograph [] Other (describe in remarks) Field Observations: Depth of Surface Water(in.): 1 Depth to Free Water in Pit(in.): 0 Depth to Saturated Soils(in.): 0 Remarks	Primary Wetland Hydrology Indicator [X] Inundated [X] Saturated in upper 12 inches [] Water marks [] Drift lines [] Sediment deposits [] Drainage patterns in wetlands	[] Oxidized root [] Water-stained [] Local soil surv [X] FAC-Neutral t [] Other (explain	channels I leaves vey data est
Soils			
Depth (in.) Hor. Matrix Mottle / 2nd Color 0-12 A 10YR 2/1	Abundance Contrast S	exture, tructure, etc. andy Clay Loam Medium Suba	ingular Blocky
Hydric Soils Indicators [] Histosol [] Histic Epipedon [] Sulfidic Odor [] Probable Aquatic Moist Regime [] Reducing Conditions [X] Gleyed or Low-Chroma Colors Unit Name: C3s Corvallis silt loam slightly Drainage Class: Somewhat poorly drained	[] Concretions [] High Organic % in S [] Organic Streaking [] Listed on Local Hyd [] Listed on National H [] Other (explain in rer	Surface Layer ric Soils List lydric Soils List narks) Haploborolls	
Remarks			
Wetland Determination [X] Hydrophytic Vegetation Present [X] Hydric Soils Present [X] Wetland Hydrology Present Remarks	[X] This Data Point is a	Wetland	

Job Number: 0877.008.010.0310

City: Hamilton

Wetland Data Point: W-3-03-upl.

Project/Site: Ravalli Co. Airport Applicant/Owner: Ravalli County Investigator: SR/EN [X] Do normal circumstances exist on the site? [] Have vegetation, soils, or hydrology been disturbed [] Is the area a potential problem area?	?	Date: October 28, 2004 County: Ravalli State: MT Community ID: Upland Station ID: S-3-03 Plot ID: 2	
Vegetation			
Dominant Species	Common Name	% Cover	Indicator
Cynoglossum officinale Centaurea maculosa Poa pratensis Cirsium arvense Dactylis glomerata Sisymbrium altissimum Carduus nutans Bouteloua gracilis Lactuca serriola Symphoricarpos albus Species that are OBL, FACW, or FAC (except FAC-) Remarks: Less than 50% FAC or wetter	Houndstongue Knapweed, Spotted Bluegrass, Kentucky Thistle, Creeping Grass, Orchard Mustard, Tall Tumble Musk thistle Blue grama Lettuce, Prickly Snowberry : Cov	wardin Classification:	FACU No Status FAC FACU+ FACU- No status FACU
Hydrology Prim	ary Wetland Hydrology Indicator	s Secondary Hydrology	v Indicators
[] Recorded Data (describe in remarks) [[] Stream, Lake, or Tide Gage [[] Aerial Photograph [[] Other (describe in remarks) [] Inundated] Saturated in upper 12 inches] Water marks] Drift lines] Sediment deposits] Drainage patterns in wetlands	[] Oxidized root [] Water-stained [] Local soil surv [] FAC-Neutral to [] Other (explain	channels leaves rey data est
Soils			
Depth Hor. Matrix Mottle / 2nd Mottle	Te	exture,	
		ructure, etc.	
0-16 A 2.5Y 3/1	Sa	andy Clay Loam Medium Suba	ingular Blocky
Hydric Soils Indicators [] Histosol [] Histic Epipedon [] Sulfidic Odor [] Probable Aquatic Moist Regime [] Reducing Conditions [X] Gleyed or Low-Chroma Colors	[] Concretions [] High Organic % in Si [] Organic Streaking [] Listed on Local Hydr [] Listed on National Hydr [] Other (explain in rem	ic Soils List ydric Soils List	
Unit Name: C3s Corvallis silt loam slightly saline Drainage Class: Somewhat poorly drained	Taxonomy: Fluvauqentic [] Field Observations mate	A CONTRACTOR OF THE CONTRACTOR	
Remarks			
Watland Datarmination			
Wetland Determination [] Hydrophytic Vegetation Present [X] Hydric Soils Present [] Wetland Hydrology Present Remarks	[] This Data Point is a	Wetland	

Job Number: 0877.008.010.0310

City: Hamilton

Wetland Data Point: W-4-03-wl.

Project/Site: Ravalli Co. Airport Applicant/Owner: Ravalli County Investigator: SR/EN [X] Do normal circumstances exist on the site? [] Have vegetation, soils, or hydrology been di [] Is the area a potential problem area? Vegetation Dominant Species Herbaceous Poa palustris Rumex crispus Carex nebrascensis	Sturbed? Common Name Bluegrass,Fowl Dock,Curly Sedge,Nebraska	Date: October 28, 2004 County: Ravalli State: MT Community ID: Wetland Station ID: S-4-03 Plot ID: 1-West **Cover** Indicator FAC FAC+ OBL
Juncus balticus Deschampsia cespitosa % Species that are OBL, FACW, or FAC (excep Remarks: Greater than 50% FAC or wetter	Rush,Baltic Hairgrass,Tufted t FAC-): C	FACW+ FACW owardin Classification:
Hydrology [] Recorded Data (describe in remarks) [] Stream, Lake, or Tide Gage [] Aerial Photograph [] Other (describe in remarks) Field Observations: Depth of Surface Water(in.): 0 Depth to Free Water in Pit(in.): 14 Depth to Saturated Soils(in.): 0	Primary Wetland Hydrology Indicate [] Inundated [X] Saturated in upper 12 inches [] Water marks [] Drift lines [] Sediment deposits [X] Drainage patterns in wetland	[] Oxidized root channels [] Water-stained leaves [] Local soil survey data [X] FAC-Neutral test [] Other (explain in remarks)
Remarks Areas of wetland were inundated.		
Soils Depth Hor. Matrix Mottle / 2nd	Mottle T	Fexture,
(in.) Color Color 0-10 A		Structure, etc.
Hydric Soils Indicators [] Histosol [X] Histic Epipedon [] Sulfidic Odor [] Probable Aquatic Moist Regime [] Reducing Conditions [] Gleyed or Low-Chroma Colors	[] Concretions [] High Organic % in a [] Organic Streaking [] Listed on Local Hyo [] Listed on National I [] Other (explain in re	dric Soils List Hydric Soils List
Unit Name: C3t Corvallis silt loam moderat Drainage Class: Poorly drained	ely saline Taxonomy: Fluvaquentio [] Field Observations ma	<i>i</i>
Remarks		
Wetland Determination [X] Hydrophytic Vegetation Present [X] Hydric Soils Present [X] Wetland Hydrology Present Remarks	. [X] This Data Point is a	a Wetland

Job Number: 0877.008.010.0310 Data Form City: Hamilton Wetland Data Point: W-4-03-upl. Routine Wetland Determination Project/Site: Ravalli Co. Airport Date: October 28, 2004 Applicant/Owner: Ravalli County County: Ravalli State: MT Investigator: SR/EN [X] Do normal circumstances exist on the site? Community ID: Upland [] Have vegetation, soils, or hydrology been disturbed? Station ID: S-4-03 [] Is the area a potential problem area? Plot ID: 2 Vegetation Dominant Species **Common Name** % Cover Indicator Carduus nutans Musk thistle No status Shrub **FACU** Rose, Woods Rosa woodsii Symphoricarpos albus **FACU** Snowberry % Species that are OBL, FACW, or FAC (except FAC-): Cowardin Classification: Remarks: Less than 50% FAC or wetter Hydrology Primary Wetland Hydrology Indicators Secondary Hydrology Indicators [] Recorded Data (describe in remarks) [] Oxidized root channels [] Inundated [] Water-stained leaves [] Saturated in upper 12 inches [] Stream, Lake, or Tide Gage [] Water marks [] Local soil survey data [] Aerial Photograph [] FAC-Neutral test [] Other (describe in remarks) [] Drift lines [] Sediment deposits [] Other (explain in remarks) Field Observations: [] Drainage patterns in wetlands Depth of Surface Water(in.): 0 Depth to Free Water in Pit(in.): >24 Depth to Saturated Soils(in.): >24 Remarks Soils Hor. Matrix Depth Mottle / 2nd Mottle Texture, Abundance Contrast Structure, etc. (in.) Color Color Sandy Loam Fine Subangular Blocky 10YR 3/1 0 - 14Hydric Soils Indicators [] Histosol [] Concretions [] Histic Epipedon [] High Organic % in Surface Layer

Wetland Determination

[] Sulfidic Odor

[] Reducing Conditions

[] Hydrophytic Vegetation Present

[] Probable Aquatic Moist Regime

[X] Gleyed or Low-Chroma Colors

Drainage Class: very poorly drained

Unit Name: C3r Corvallis silt loam poorly drained var. Taxonomy: Typic Haplaquolls

- [X] Hydric Soils Present
- [] Wetland Hydrology Present

Remarks

Remarks

[] This Data Point is a Wetland

[] Field Observations match map

[] Listed on Local Hydric Soils List

[] Listed on National Hydric Soils List [] Other (explain in remarks)

[] Organic Streaking

Job Number: 0877.008.010.0310 **Data Form** City: Hamilton **Routine Wetland Determination** Wetland Data Point: W-4-03-wl. Project/Site: Ravalli Co. Airport Date: October 28, 2004 Applicant/Owner: Ravalli County County: Ravalli Investigator: SR/EN State: MT [X] Do normal circumstances exist on the site? Community ID: Wetland [] Have vegetation, soils, or hydrology been disturbed? Station ID: S-4-03 [] Is the area a potential problem area? Plot ID: 3-East Vegetation Dominant Species Common Name % Cover Indicator Herbaceous Hordeum jubatum Barley, Fox-Tail FAC Veronica americana Speedwell, American OBL Carex nebrascensis Sedge, Nebraska OBL Glyceria grandis Grass, American Manna No status Phalaris arundinacea Grass, Reed Canary FACW % Species that are OBL, FACW, or FAC (except FAC-): Cowardin Classification: Remarks: Greater than 50% FAC or wetter Hydrology Primary Wetland Hydrology Indicators Secondary Hydrology Indicators [] Recorded Data (describe in remarks) [] Inundated [] Oxidized root channels [] Stream, Lake, or Tide Gage [X] Saturated in upper 12 inches [] Water-stained leaves [] Aerial Photograph [] Water marks [] Local soil survey data [] Other (describe in remarks) [] Drift lines [X] FAC-Neutral test [] Sediment deposits [] Other (explain in remarks) Field Observations: [X] Drainage patterns in wetlands Depth of Surface Water(in.): 0 Depth to Free Water in Pit(in.): >16 Depth to Saturated Soils(in.): 0 Remarks Soils Depth Hor. Matrix Mottle / 2nd Mottle Texture, (in.) Color Color Abundance Contrast Structure, etc. 10YR 2/1 0 - 12Sandy Loam Fine Subangular Blocky Hydric Soils Indicators [] Histosol [] Concretions [] Histic Epipedon [] High Organic % in Surface Layer [] Sulfidic Odor

Wetland Determination

[] Reducing Conditions

[X] Hydrophytic Vegetation Present

[] Probable Aquatic Moist Regime

[X] Gleyed or Low-Chroma Colors

Drainage Class: Very poorly drained

Unit Name: C3r Corvallis silt loam poorly drained var. Taxonomy: Typic Haplaquolls

[X] Hydric Soils Present

[X] Wetland Hydrology Present

Remarks

Remarks

[X] This Data Point is a Wetland

[] Listed on Local Hydric Soils List

[] Other (explain in remarks)

[] Field Observations match map

[] Listed on National Hydric Soils List

[] Organic Streaking

Job Number: 0877.008.010.0310

City: Hamilton

Wetland Data Point: W-4-04-wl.

Project/Site: Ravalli Co. Airport Applicant/Owner: Ravalli County Investigator: SR/EN [X] Do normal circumstances exist on the site? [] Have vegetation, soils, or hydrology been disturbed? [] Is the area a potential problem area?		Date: October 28, 2004 County: Ravalli State: MT Community ID: Wetland Station ID: S-4-04 Plot ID: 4-Gird Creek	
Vegetation		\$	
Dominant Species Herbaceous	Common Name	% Cover	Indicator
Juncus balticus Carex nebrascensis Phleum pratense Deschampsia cespitosa Glyceria grandis Veronica americana Phalaris arundinacea % Species that are OBL, FACW, or FAC (except FAC-):	Rush,Baltic Sedge,Nebraska Timothy Hairgrass,Tufted Grass,American Manna Speedwell,American Grass,Reed Canary Cow	vardin Classification:	FACW+ OBL FAC- FACW No status OBL FACW
Remarks: Greater than 50% FAC or wetter			
[] Recorded Data (describe in remarks) [X] [] Stream, Lake, or Tide Gage [X] [] Aerial Photograph [] [] Other (describe in remarks) [] Field Observations:	ry Wetland Hydrology Indicators Inundated Saturated in upper 12 inches Water marks Drift lines Sediment deposits Drainage patterns in wetlands	Secondary Hydrology [] Oxidized root of a secondary Hydrology [] Water-stained [] Local soil survival [X] FAC-Neutral to a secondary Hydrology [] Other (explain	channels leaves ey data est
Soils			<u> </u>
Depth Hor. Matrix Mottle / 2nd Mottle	undance Contrast Str	kture, ucture, etc. amy Sand Loose	
8+ Rock Hydric Soils Indicators [] Histosol [] Histic Epipedon [] Sulfidic Odor [] Probable Aquatic Moist Regime [] Reducing Conditions [X] Gleyed or Low-Chroma Colors	[] Concretions [] High Organic % in Su [X] Organic Streaking [] Listed on Local Hydric [] Listed on National Hy [] Other (explain in remains	c Soils List dric Soils List	
Unit Name: C3r Corvallis silt loam poorly drained va Drainage Class: Very poorly drained	ar. Taxonomy: Typic Haplaque [] Field Observations match		
Remarks			
Wetland Determination [X] Hydrophytic Vegetation Present [X] Hydric Soils Present [X] Wetland Hydrology Present Remarks	[X] This Data Point is a V	Vetland	

Job Number: 0877.008.010.0310

City: Hamilton

Wetland Data Point: W-5-03-wl.

Project/Site: Ravalli Co. Airport Applicant/Owner: Ravalli County Investigator: SR/EN [X] Do normal circumstances exist on the site? [] Have vegetation, soils, or hydrology been disturbe [] Is the area a potential problem area?	ed?	Date: October 28, 2004 County: Ravalli State: MT Community ID: Wetland Station ID: S-5-03 Plot ID: 1	
Vegetation			10 10
Dominant Species	Common Name	% Cover	Indicator
<u>Herbaceous</u>			
Carex nebrascensis Solanum dulcamara Veronica americana Juncus tenuis Trifolium hybridum Rumex crispus Juncus balticus Deschampsia cespitosa Tree Salix bebbiana % Species that are OBL, FACW, or FAC (except FAC) Remarks: Greater than 50% FAC or wetter	Sedge,Nebraska Nightshade,Climbing Speedwell,American Rush,Slender Clover,Alsike Dock,Curly Rush,Baltic Hairgrass,Tufted Willow,Bebb	wardin Classification:	OBL FAC+ OBL FACW- FAC FAC+ FACW+ FACW+ FACW
Hydrology Pri	iman, Watland Hydrology, Indicator	- Cocondon Hudrolom	, Indicators
[] Recorded Data (describe in remarks)	imary Wetland Hydrology Indicator [=] Inundated	s Secondary Hydrology [] Oxidized root	
	[X] Saturated in upper 12 inches [] Water marks	[] Water-stained [] Local soil surv	leaves
Other (describe in remarks)	[] Drift lines	[] FAC-Neutral te	
5 5 (2)	[] Sediment deposits	[] Other (explain	
Field Observations:	[X] Drainage patterns in wetlands	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	
Depth of Surface Water(in.): 0	-		
Depth to Free Water in Pit(in.): >16			
Depth to Saturated Soils(in.): 0			120
Remarks			
Soils		*	
Depth Hor. Matrix Mottle / 2nd Mottle	e Te	xture,	
		ructure, etc.	
0-6 A 10YR 3/1	Sa	ndy Loam Medium Subangula	r Blocky
Hydric Soils Indicators			
[] Histosol	[] Concretions		
[] Histic Epipedon	[] High Organic % in St	ırface Layer	
[] Sulfidic Odor [] Organic Streaking			
[] Probable Aquatic Moist Regime	[] Listed on Local Hydri	c Soils List	
[] Reducing Conditions [] Listed on National Hydric Soils List			
[X] Gleyed or Low-Chroma Colors	[] Other (explain in rem	arks)	
Unit Name: C3s Corvallis silt loam slightly saling Drainage Class: Somewhat poorly drained	e Taxonomy: Fluvauqentic I [] Field Observations mate		
Remarks			
6 inches+ is rock			
Wetland Determination			
[X] Hydrophytic Vegetation Present	[X] This Data Point is a	Wetland	
[X] Hydric Soils Present	p. 1		
[X] Wetland Hydrology Present			
Remarks			

Job Number: 0877.008.010.0310 **Data Form** City: Hamilton Routine Wetland Determination Wetland Data Point: W-5-03-upl. Project/Site: Ravalli Co. Airport Date: October 28, 2004 Applicant/Owner: Ravalli County County: Ravalli Investigator: SR/EN State: MT [X] Do normal circumstances exist on the site? Community ID: Upland [] Have vegetation, soils, or hydrology been disturbed? Station ID: S-5-03 [] Is the area a potential problem area? Plot ID: 2 Vegetation Dominant Species Common Name % Cover Indicator **Herbaceous** Lactuca serriola Lettuce, Prickly **FACU** Scouring-Rush, Smooth Equisetum laevigatum **FACW** Agropyron trachycaulum Wheatgrass, Slender FAC NI, FACW+-UPL Trifolium spp. Clover spp. Dandelion, Common Taraxacum officinale **FACU** Carduus nutans Musk thistle No status Centaurea maculosa Knapweed, Spotted No Status Shrub Rosa woodsii Rose, Woods **FACU** % Species that are OBL, FACW, or FAC (except FAC-): Cowardin Classification: Remarks: Less than 50% FAC or wetter Hydrology Primary Wetland Hydrology Indicators Secondary Hydrology Indicators [] Recorded Data (describe in remarks) [] Inundated [] Oxidized root channels [] Stream, Lake, or Tide Gage [] Saturated in upper 12 inches [] Water-stained leaves [] Aerial Photograph [] Local soil survey data 1 Water marks [] Other (describe in remarks) [] Drift lines [] FAC-Neutral test [] Sediment deposits [] Other (explain in remarks) Field Observations: [] Drainage patterns in wetlands Depth of Surface Water(in.): 0 Depth to Free Water in Pit(in.): >16 Depth to Saturated Soils(in.): >16 Remarks Soils Depth Hor. Matrix Mottle / 2nd Mottle Texture, Structure, etc. (in.) Color Color Abundance Contrast 0-16 10YR 3/1 Sandy Clay Loam Medium Subangular Blocky Hydric Soils Indicators [] Histosol [] Concretions [] Histic Epipedon [] High Organic % in Surface Layer [] Sulfidic Odor [] Organic Streaking [] Probable Aquatic Moist Regime [] Listed on Local Hydric Soils List [] Reducing Conditions [] Listed on National Hydric Soils List [X] Gleyed or Low-Chroma Colors [] Other (explain in remarks)

Wetland Determination

[] Hydrophytic Vegetation Present

Unit Name: C3s Corvallis silt loam slightly saline

Drainage Class: Somewhat poorly drained

[X] Hydric Soils Present

[] Wetland Hydrology Present

Remarks

Remarks

[] This Data Point is a Wetland

Taxonomy: Fluvauqentic Haploborolls

[] Field Observations match map

Job Number: 0877.008.010.0310

City: Hamilton

Wetland Data Point: W-6-03-wl.

Project/Site: Ravalli Co. Airport Applicant/Owner: Ravalli County Investigator: SR/EN [X] Do normal circumstances exist on the site? [] Have vegetation, soils, or hydrology been distur [] Is the area a potential problem area?	() bed?	Date: October 28, 2004 County: Ravalli State: MT Community ID: Wetland Station ID: S-6-03 Plot ID: 1
Vegetation	A Second Property of the Control of	W. Oranga Hardinatan
Dominant Species	Common Name	% Cover Indicator
Equisetum laevigatum Herbaceous Phalaris arundinacea Rumex crispus Deschampsia cespitosa Carex spp. Juncus balticus Carex nebrascensis Species that are OBL, FACW, or FAC (except FAREMARKS: Greater than 50% FAC or wetter	Scouring-Rush,Smooth Grass,Reed Canary Dock,Curly Hairgrass,Tufted Sedge spp. Rush,Baltic Sedge,Nebraska AC-): Cowa	FACW FACW FAC+ FACW NI, OBL-FAC FACW+ OBL
Hydrology	Primary Wetland Hydrology Indicators	Secondary Hydrology Indicators
[] Recorded Data (describe in remarks) [] Stream, Lake, or Tide Gage [] Aerial Photograph [] Other (describe in remarks) Field Observations: Depth of Surface Water(in.): 0 Depth to Free Water in Pit(in.): >16 Depth to Saturated Soils(in.): >16 Remarks	[] Inundated [] Saturated in upper 12 inches [] Water marks [] Drift lines [] Sediment deposits [X] Drainage patterns in wetlands	[] Oxidized root channels [] Water-stained leaves [] Local soil survey data [X] FAC-Neutral test [] Other (explain in remarks)
Soils		
Depth (in.) Hor. Matrix (in.) Mottle / 2nd Mo Color 0-16 A 10YR 3/1	Abundance Contrast Stru	ure, cture, etc. Loam Medium Subangular Blocky
Hydric Soils Indicators [] Histosol [] Histic Epipedon [X] Sulfidic Odor [] Probable Aquatic Moist Regime [] Reducing Conditions [X] Gleyed or Low-Chroma Colors	[] Concretions [] High Organic % in Sur [] Organic Streaking [] Listed on Local Hydric [] Listed on National Hyd [] Other (explain in rema	Soils List Iric Soils List
Unit Name: C3r Corvallis silt loam poorly drain Drainage Class: Very poorly drained	ed var. Taxonomy: Typic Haplaquol [X] Field Observations match	
Remarks		
Wetland Determination [X] Hydrophytic Vegetation Present [X] Hydric Soils Present [X] Wetland Hydrology Present Remarks Shares upland data point with W-18-04	[X] This Data Point is a W	'etland

Job Number: 0877.008.010.0310 **Data Form** City: Hamilton **Routine Wetland Determination** Wetland Data Point: W-6-03-upl. Project/Site: Ravalli Co. Airport Date: October 28, 2004 Applicant/Owner: Ravalli County County: Ravalli Investigator: SR/EN State: MT [X] Do normal circumstances exist on the site? Community ID: Upland [] Have vegetation, soils, or hydrology been disturbed? Station ID: S-6-03 [] Is the area a potential problem area? Plot ID: 2 Vegetation Dominant Species Common Name % Cover Indicator Shrub **FACU** Rosa woodsii Rose, Woods Symphoricarpos albus Snowberry **FACU** % Species that are OBL, FACW, or FAC (except FAC-): Cowardin Classification: Remarks: Less than 50% FAC or wetter Hydrology Secondary Hydrology Indicators Primary Wetland Hydrology Indicators [] Oxidized root channels [] Recorded Data (describe in remarks) [] Inundated [] Water-stained leaves [] Stream, Lake, or Tide Gage [] Saturated in upper 12 inches [] Water marks [] Local soil survey data [] Aerial Photograph [] Other (describe in remarks) [] Drift lines [] FAC-Neutral test [] Sediment deposits [] Other (explain in remarks) Field Observations: [] Drainage patterns in wetlands Depth of Surface Water(in.): 0 Depth to Free Water in Pit(in.): >16 Depth to Saturated Soils(in.): >16 Remarks Soils Depth Hor. Matrix Mottle / 2nd Mottle Texture, (in.) Color Color Abundance Contrast Structure, etc. 10YR 3/2 Sandy Clay Loam Medium Subangular Blocky 0-16 Hydric Soils Indicators [] Histosol [] Concretions [] Histic Epipedon [] High Organic % in Surface Layer [] Sulfidic Odor [] Organic Streaking [] Probable Aquatic Moist Regime [] Listed on Local Hydric Soils List [] Reducing Conditions [] Listed on National Hydric Soils List [] Gleyed or Low-Chroma Colors [] Other (explain in remarks) Unit Name: C3r Corvallis silt loam poorly drained var. Taxonomy: Typic Haplaquolls Drainage Class: Very poorly drained [X] Field Observations match map

[] This Data Point is a Wetland

Remarks

Remarks

Wetland Determination

[] Hydrophytic Vegetation Present

[] Hydric Soils Present[] Wetland Hydrology Present

Job Number: 0877.008.010.0310

City: Hamilton

Wetland Data Point: W-7-03-wl.

Project/Site: Ravalli Co. Airport Applicant/Owner: Ravalli County Investigator: SR/EN [X] Do normal circumstances exist on the site? [] Have vegetation, soils, or hydrology been di [] Is the area a potential problem area?	sturbed?	Date: October 28, 2004 County: Ravalli Slate: MT Community ID: Wetland Station ID: S-7-03 Plot ID: 1
Vegetation		N/ O badlantan
Dominant Species Herbaceous Rumex crispus Deschampsia cespitosa Poa palustris Equisetum laevigatum Species Ihat are OBL, FACW, or FAC (excepted in the company of the co	Common Name Dock,Curly Hairgrass,Tufted Bluegrass,Fowl Scouring-Rush,Smooth of FAC-): Co	% Cover Indicator FAC+ FACW FAC FACW FACW FACW FACW FACW FACW
Hydrology [] Recorded Data (describe in remarks)	Primary Wetland Hydrology Indicato [] Inundated [] Saturated in upper 12 inches [] Water marks [] Drift lines [] Sediment deposits [X] Drainage patterns in wetland	[] Oxidized root channels [] Water-stained leaves [] Local soil survey data [X] FAC-Neutral test [] Other (explain in remarks)
Soils		
Depth Hor. Matrix Mottle / 2nd	Mottle T	exture,
(in.) Color Color 0-16 A 10YR 2/1		Structure, etc. Sandy Clay Loam Fine Subangular Blocky
Hydric Soils Indicators [] Histosol [] Histic Epipedon [X] Sulfidic Odor [] Probable Aquatic Moist Regime [] Reducing Conditions [X] Gleyed or Low-Chroma Colors	[] Concretions [] High Organic % in 9 [] Organic Streaking [] Listed on Local Hyo [] Listed on National I [] Other (explain in re	dric Soils List Hydric Soils List marks)
Unit Name: C3r Corvallis silt loam poorly on Drainage Class: Very poorly drained	drained var. Taxonomy: Typic Haplac [] Field Observations ma	
Remarks		
Wetland Determination [X] Hydrophytic Vegetation Present [X] Hydric Soils Present [X] Wetland Hydrology Present Remarks	[X] This Data Point is a	a Wetland

Job Number: 0877.008.010.0310

City: Hamilton

Wetland Data Point: W-7-03-upl.

Project/Site: Ravalli Co. Airport Applicant/Owner: Ravalli County Investigator: SR/EN [X] Do normal circumstances exist on the site? [] Have vegetation, soils, or hydrology been disturbed [] Is the area a potential problem area?	?	Date: October 28, 2004 County: Ravalli State: MT Community ID: Upland Station ID: S-7-03 Plot ID: 2	
Vegetation	Common Name	% Cover	Indicator
Dominant Species Herbaceous	Common Name	76 COVEI	muicator
Agropyron smithii Aster spp. Equisetum laevigatum Cirsium arvense Shrub	Whealgrass,Western Aster spp. Scouring-Rush,Smooth Thistle,Creeping		FACU NI, OBL-UPL FACW FACU+
Symphoricarpos albus % Species that are OBL, FACW, or FAC (except FAC-) Remarks: Less than 50% FAC or wetter	Snowberry Cov	wardin Classification:	FACU
Hydrology Prim	ary Wetland Hydrology Indicator	s Secondary Hydrology	v Indicators
[] Recorded Data (describe in remarks) [[] Stream, Lake, or Tide Gage [[] Aerial Photograph [[] Other (describe in remarks) [] Inundated] Saturated in upper 12 inches] Water marks] Drift lines] Sediment deposits] Drainage patterns in wetlands	[] Oxidized root [] Water-stained [] Local soil surv [] FAC-Neutral to [] Other (explain	channels leaves rey data est
		2 (a)	
Soils Depth Hor. Matrix Mottle / 2nd Mottle	Te	xture,	
	bundance Contrast Str	ructure, etc. indy Clay Loam Coarse Subar	ngular Blocky
Hydric Soils Indicators [] Histosol [] Histic Epipedon [] Sulfidic Odor [] Probable Aquatic Moist Regime [] Reducing Conditions [] Gleyed or Low-Chroma Colors	[] Concretions [] High Organic % in Some streaking [] Organic Streaking [] Listed on Local Hydrical Streaking [] Listed on National Hydrical Streaking	ic Soils List ydric Soils List	
Unit Name: C3s Corvallis silt loam slightly saline Drainage Class: Somewhat poorly drained	Taxonomy: Fluvauqentic I [] Field Observations mate		
Remarks			
Wetland Determination			
[] Hydrophytic Vegetation Present [] Hydric Soils Present [] Wetland Hydrology Present Remarks	[] This Data Point is a N	Wetland	

Job Number: 0877.008.010.0310

City: Hamilton Wetland Data Point: W-8-03-wl.

		
Project/Site: Ravalli Co. Airport	D	ate: October 28, 2004
Applicant/Owner: Ravalli County	C	county: Ravalli
Investigator: SR/EN	S	tate: MT
[X] Do normal circumstances exist on the site?	C	community ID: Wetland
[] Have vegetation, soils, or hydrology been dis	sturbed? S	tation ID: S-8-03
[] Is the area a potential problem area?	P	lot ID: 1
Vegetation		
Dominant Species	Common Name	% Cover Indicator
Herbaceous	The second secon	f
Carex nebrascensis	Sedge,Nebraska	OBL
Plantago spp.	Plantain	OBL-UPL
Epilobium ciliatum Phleum pratense	Willow-Herb,Hairy Timothy	FACW- FAC-
Cirsium arvense	Thiotily Thistle,Creeping	FACU+
Deschampsia cespitosa	Hairgrass,Tufted	FACW
Glyceria grandis	Grass, American Manna	No status
Veronica americana	Speedwell,American	OBL
% Species that are OBL, FACW, or FAC (except	t FAC-): Cowar	rdin Classification:
Remarks: Greater than 50% FAC or wetter		
Hydrology	Primary Wetland Hydrology Indicators	Secondary Hydrology Indicators
[] Recorded Data (describe in remarks)	[X] Inundated	[] Oxidized root channels
[] Stream, Lake, or Tide Gage	[X] Saturated in upper 12 inches	[] Water-stained leaves
[] Aerial Photograph	[] Water marks	[] Local soil survey data
[] Other (describe in remarks)	[] Drift lines	[X] FAC-Neutral test
	[] Sediment deposits	[] Other (explain in remarks)
Field Observations:	[X] Drainage patterns in wetlands	[] other (explain in remaine)
Depth of Surface Water(in.): 0	[X] Brainage patterns in Wellands	
Depth to Free Water in Pit(in.): 4		
Depth to Saturated Soils(in.): 0		
Remarks		
Remarks		
Soils		
	. A. III	
Depth Hor. Matrix Mottle / 2nd (in.) Color Color		ure, eture, etc.
0-10 A 10YR 2/1		y Loam Fine Subangular Blocky
0-10 A 1011(2/1	Galid	y Loam Time Oubangular Blocky
		The state of the s
Hydric Soils Indicators		
[] Histosol	[] Concretions	
[] Histic Epipedon	[] High Organic % in Surfa	ace Layer
[X] Sulfidic Odor	[] Organic Streaking	
[] Probable Aquatic Moist Regime	[] Listed on Local Hydric S	
[] Reducing Conditions	[] Listed on National Hydr	
[X] Gleyed or Low-Chroma Colors	[] Other (explain in remark	ks)
Unit Name: C3s Corvallis silt loam slightly s	saline Taxonomy: Fluvaugentic Ha	ploborolls
Drainage Class: Somewhat poorly drained	[] Field Observations match	шар
Remarks		
10+ inches is rock		
Wetland Determination		
[X] Hydrophytic Vegetation Present		atland
[X] Hydric Soils Present	[V] This Data Daint is a Wa	
[1] Flyulic Solis Fleselli	[X] This Data Point is a We	suand
IVI Wotland Hydrology Drocent	[X] This Data Point is a We	stanu
[X] Wetland Hydrology Present	[X] This Data Point is a We	rua) lu
[X] Wetland Hydrology Present Remarks Share upland data point with W-5-03-upl.	[X] This Data Point is a We	nana

Job Number: 0877.008.010.0310

City: Hamilton

Wetland Data Point: W-8-03-upl.

Project/Site: Ravalli Co. Airport		
A !!!/O D!!! Cb.		Date: October 28, 2004
Applicant/Owner: Ravalli County		County: Ravalli
Investigator: SR/EN		State: MT
[X] Do normal circumstances exist on the site?		Community ID: Upland
- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	Ch a deutle	
[] Have vegetation, soils, or hydrology been dis	sturbed?	Station ID: S-8-03
[] Is the area a potential problem area?		Plot ID: 2
Vegetation		
Dominant Species	Common Name	% Cover Indicator
Herbaceous	<u> </u>	
Trifolium spp.	Clover spp.	NI, FACW+-U
Centaurea maculosa	Knapweed, Spotted	No Status
Phleum pratense	Timothy	FAC-
Cirsium arvense	Thistle, Creeping	FACU+
% Species that are OBL, FACW, or FAC (except		Cowardin Classification:
Remarks: Less than 50% FAC or wetter	,	
Remarks. Less than 50% (Ac of wetter		
Hydrology	Drimon, Motlond Historian - 1-11-	otoro Conondani Historia di Indiante de
	Primary Wetland Hydrology Indic	
[] Recorded Data (describe in remarks)	[] Inundated	[] Oxidized root channels
[] Stream, Lake, or Tide Gage	[] Saturated in upper 12 inch	es [] Water-stained leaves
[] Aerial Photograph	[] Water marks	[] Local soil survey data
[] Other (describe in remarks)	[] Drift lines	[] FAC-Neutral test
[] Carlot (decembe at terraine)	[] Sediment deposits	[] Other (explain in remarks)
Field Observations:	•	
Depth of Surface Water(in.): 0	[] Drainage patterns in wetla	nas ·
CONTROL OF CONTROL STATE CONTROL CONTR		
Depth to Free Water in Pit(in.): >16		
Depth to Saturated Soils(in.): >16		
Remarks		
2		
Soils		
	Mottle	Texture,
Depth Hor. Matrix Mottle / 2nd		
Depth Hor. Matrix Mottle / 2nd (in.) Color Color	Mottle Abundance Contrast	Structure, etc.
Depth Hor. Matrix Mottle / 2nd		
Depth Hor. Matrix Mottle / 2nd (in.) Color Color Color 0-16 A 10YR 3/2		Structure, etc.
Depth (in.) Hor. Matrix Color Mottle / 2nd 0-16 A 10YR 3/2 Hydric Soils Indicators	Abundance Contrast	Structure, etc.
Depth Hor. Matrix Mottle / 2nd (in.) Color Color 0-16 A 10YR 3/2 Hydric Soils Indicators [] Histosol	Abundance Contrast [] Concretions	Structure, etc. Sandy Loam Medium Subangular Blocky
Depth (in.) Hor. Matrix Color Mottle / 2nd 0-16 A 10YR 3/2 Hydric Soils Indicators	Abundance Contrast	Structure, etc. Sandy Loam Medium Subangular Blocky
Depth Hor. Matrix Mottle / 2nd (in.) Color Color 0-16 A 10YR 3/2 Hydric Soils Indicators [] Histosol	Abundance Contrast [] Concretions [] High Organic % i	Structure, etc. Sandy Loam Medium Subangular Blocky n Surface Layer
Depth Hor. Matrix Mottle / 2nd (in.) Color Color 0-16 A 10YR 3/2 Hydric Soils Indicators [] Histosol [] Histic Epipedon [] Sulfidic Odor	Abundance Contrast [] Concretions [] High Organic % i [] Organic Streakin	Structure, etc. Sandy Loam Medium Subangular Blocky n Surface Layer
Depth Hor. Matrix Mottle / 2nd (in.) Color Color 0-16 A 10YR 3/2 Hydric Soils Indicators [] Histosol [] Histic Epipedon [] Sulfidic Odor [] Probable Aquatic Moist Regime	Abundance Contrast [] Concretions [] High Organic % i [] Organic Streakin [] Listed on Local H	Structure, etc. Sandy Loam Medium Subangular Blocky n Surface Layer g lydric Soils List
Depth Hor. Matrix Mottle / 2nd (in.) Color Color 0-16 A 10YR 3/2 Hydric Soils Indicators [] Histosol [] Histic Epipedon [] Sulfidic Odor [] Probable Aquatic Moist Regime [] Reducing Conditions	Abundance Contrast [] Concretions [] High Organic % i [] Organic Streakin [] Listed on Local H	Structure, etc. Sandy Loam Medium Subangular Blocky n Surface Layer g lydric Soils List al Hydric Soils List
Depth Hor. Matrix Mottle / 2nd (in.) Color Color 0-16 A 10YR 3/2 Hydric Soils Indicators [] Histosol [] Histic Epipedon [] Sulfidic Odor [] Probable Aquatic Moist Regime	Abundance Contrast [] Concretions [] High Organic % i [] Organic Streakin [] Listed on Local H	Structure, etc. Sandy Loam Medium Subangular Blocky n Surface Layer g lydric Soils List al Hydric Soils List
Depth Hor. Matrix Mottle / 2nd (in.) Color Color 0-16 A 10YR 3/2 Hydric Soils Indicators [] Histosol [] Histic Epipedon [] Sulfidic Odor [] Probable Aquatic Moist Regime [] Reducing Conditions [] Gleyed or Low-Chroma Colors	Abundance Contrast [] Concretions [] High Organic % i [] Organic Streakin [] Listed on Local H [] Listed on National [] Other (explain in	Structure, etc. Sandy Loam Medium Subangular Blocky In Surface Layer In Surface La
Depth Hor. Matrix Mottle / 2nd (in.) Color Color 0-16 A 10YR 3/2 Hydric Soils Indicators [] Histosol [] Histic Epipedon [] Sulfidic Odor [] Probable Aquatic Moist Regime [] Reducing Conditions [] Gleyed or Low-Chroma Colors Unit Name: C3s Corvallis silt loam slightly silts.	Abundance Contrast [] Concretions [] High Organic % i [] Organic Streakin [] Listed on Local H [] Listed on Nationa [] Other (explain in	Structure, etc. Sandy Loam Medium Subangular Blocky In Surface Layer g lydric Soils List al Hydric Soils List remarks) tic Haploborolls
Depth Hor. Matrix Mottle / 2nd (in.) Color Color 0-16 A 10YR 3/2 Hydric Soils Indicators [] Histosol [] Histic Epipedon [] Sulfidic Odor [] Probable Aquatic Moist Regime [] Reducing Conditions [] Gleyed or Low-Chroma Colors	Abundance Contrast [] Concretions [] High Organic % i [] Organic Streakin [] Listed on Local H [] Listed on National [] Other (explain in	Structure, etc. Sandy Loam Medium Subangular Blocky In Surface Layer g lydric Soils List al Hydric Soils List remarks) tic Haploborolls
Depth Hor. Matrix Mottle / 2nd (in.) Color Color 0-16 A 10YR 3/2 Hydric Soils Indicators [] Histosol [] Histic Epipedon [] Sulfidic Odor [] Probable Aquatic Moist Regime [] Reducing Conditions [] Gleyed or Low-Chroma Colors Unit Name: C3s Corvallis silt loam slightly silts.	Abundance Contrast [] Concretions [] High Organic % i [] Organic Streakin [] Listed on Local H [] Listed on Nationa [] Other (explain in	Structure, etc. Sandy Loam Medium Subangular Blocky In Surface Layer g lydric Soils List al Hydric Soils List remarks) tic Haploborolls
Depth Hor. Matrix Mottle / 2nd (in.) Color Color 0-16 A 10YR 3/2 Hydric Soils Indicators [] Histosol [] Histic Epipedon [] Sulfidic Odor [] Probable Aquatic Moist Regime [] Reducing Conditions [] Gleyed or Low-Chroma Colors Unit Name: C3s Corvallis silt loam slightly something of the colors	Abundance Contrast [] Concretions [] High Organic % i [] Organic Streakin [] Listed on Local H [] Listed on Nationa [] Other (explain in	Structure, etc. Sandy Loam Medium Subangular Blocky In Surface Layer g lydric Soils List al Hydric Soils List remarks) tic Haploborolls
Depth Hor. Matrix Mottle / 2nd (in.) Color Color 0-16 A 10YR 3/2 Hydric Soils Indicators [] Histosol [] Histic Epipedon [] Sulfidic Odor [] Probable Aquatic Moist Regime [] Reducing Conditions [] Gleyed or Low-Chroma Colors Unit Name: C3s Corvallis silt loam slightly something prainage Class: Somewhat poorly drained Remarks Wetland Determination	Abundance Contrast [] Concretions [] High Organic % i [] Organic Streakin [] Listed on Local H [] Listed on Nationa [] Other (explain in saline Taxonomy: Fluvauqen [] Field Observations in	Structure, etc. Sandy Loam Medium Subangular Blocky In Surface Layer g lydric Soils List al Hydric Soils List remarks) tic Haploborolls match map
Depth Hor. Matrix Mottle / 2nd (in.) Color Color 0-16 A 10YR 3/2 Hydric Soils Indicators [] Histosol [] Histic Epipedon [] Sulfidic Odor [] Probable Aquatic Moist Regime [] Reducing Conditions [] Gleyed or Low-Chroma Colors Unit Name: C3s Corvallis silt loam slightly some Drainage Class: Somewhat poorly drained Remarks Wetland Determination [] Hydrophytic Vegetation Present	Abundance Contrast [] Concretions [] High Organic % i [] Organic Streakin [] Listed on Local H [] Listed on Nationa [] Other (explain in	Structure, etc. Sandy Loam Medium Subangular Blocky In Surface Layer g lydric Soils List al Hydric Soils List remarks) tic Haploborolls match map
Depth Hor. Matrix Mottle / 2nd (in.) Color Color 0-16 A 10YR 3/2 Hydric Soils Indicators [] Histosol [] Histic Epipedon [] Sulfidic Odor [] Probable Aquatic Moist Regime [] Reducing Conditions [] Gleyed or Low-Chroma Colors Unit Name: C3s Corvallis silt loam slightly something prainage Class: Somewhat poorly drained Remarks Wetland Determination	Abundance Contrast [] Concretions [] High Organic % i [] Organic Streakin [] Listed on Local H [] Listed on Nationa [] Other (explain in saline Taxonomy: Fluvauqen [] Field Observations in	Structure, etc. Sandy Loam Medium Subangular Blocky In Surface Layer g lydric Soils List al Hydric Soils List remarks) tic Haploborolls match map
Depth Hor. Matrix Mottle / 2nd (in.) Color Color 0-16 A 10YR 3/2 Hydric Soils Indicators [] Histosol [] Histic Epipedon [] Sulfidic Odor [] Probable Aquatic Moist Regime [] Reducing Conditions [] Gleyed or Low-Chroma Colors Unit Name: C3s Corvallis silt loam slightly sometimes Drainage Class: Somewhat poorly drained Remarks Wetland Determination [] Hydrophytic Vegetation Present	Abundance Contrast [] Concretions [] High Organic % i [] Organic Streakin [] Listed on Local H [] Listed on Nationa [] Other (explain in saline Taxonomy: Fluvauqen [] Field Observations in	Structure, etc. Sandy Loam Medium Subangular Blocky In Surface Layer g lydric Soils List al Hydric Soils List remarks) tic Haploborolls match map

Job Number: 0877.008.010.0310 Data Form City: Hamilton **Routine Wetland Determination** Wetland Data Point: W-9-03-wl. Project/Site: Ravalli Co. Airport Date: October 28, 2004 Applicant/Owner: Ravalli County County: Ravalli Investigator: SR/EN State: MT [X] Do normal circumstances exist on the site? Community ID: Wetland [] Have vegetation, soils, or hydrology been disturbed? Station ID: S-9-03 [] Is the area a potential problem area? Plot ID: 1 Vegetation Dominant Species Common Name % Cover Indicator **Herbaceous** Phleum alpinum Timothy, Alpine **FACW** Deschampsia cespitosa Hairgrass, Tufted **FACW** Juncus balticus Rush, Baltic FACW+ Equisetum laevigatum Scouring-Rush, Smooth **FACW** % Species that are OBL, FACW, or FAC (except FAC-): Cowardin Classification: Remarks: Greater than 50% FAC or wetter Hydrology Primary Wetland Hydrology Indicators Secondary Hydrology Indicators [] Recorded Data (describe in remarks) [] Inundated [] Oxidized root channels [] Stream, Lake, or Tide Gage] Saturated in upper 12 inches [] Water-stained leaves] Aerial Photograph] Water marks [] Local soil survey data] Drift lines [] Other (describe in remarks) [X] FAC-Neutral test [] Sediment deposits [] Other (explain in remarks) Field Observations: [X] Drainage patterns in wetlands Depth of Surface Water(in.): 0 Depth to Free Water in Pit(in.): >16 Depth to Saturated Soils(in.): >16 Remarks Soils Depth Hor, Matrix Mottle / 2nd Mottle Texture. Color Color Abundance Contrast Structure, etc. (in.) 10YR 3/1 0 - 16Sandy Clay Loam Fine Subangular Blocky Hydric Soils Indicators [] Histosol [] Concretions] Histic Epipedon] High Organic % in Surface Layer] Sulfidic Odor [] Organic Streaking

Wetland Determination

[] Reducing Conditions

[X] Hydrophytic Vegetation Present

] Probable Aquatic Moist Regime

Drainage Class: Somewhat poorly drained

Unit Name: C3s Corvallis silt loam slightly saline

[X] Gleyed or Low-Chroma Colors

[X] Hydric Soils Present

[X] Wetland Hydrology Present

Remarks

Remarks

[X] This Data Point is a Wetland

[] Listed on Local Hydric Soils List

Taxonomy: Fluvauqentic Haploborolls

[] Other (explain in remarks)

[] Field Observations match map

[] Listed on National Hydric Soils List

Job Number: 0877.008.010.0310 Data Form City: Hamilton Routine Wetland Determination Wetland Data Point: W-9-03-upl. Project/Site: Ravalli Co. Airport Date: October 28, 2004 Applicant/Owner: Ravalli County County: Ravalli Investigator: SR/EN State: MT [X] Do normal circumstances exist on the site? Community ID: Upland [] Have vegetation, soils, or hydrology been disturbed? Station ID: S-9-03 [] Is the area a potential problem area? Plot ID: 2 Vegetation Dominant Species % Cover Indicator Common Name **Herbaceous** Trifolium spp. NI, FACW+-UPL Clover spp. Medicago sativa Alfalfa Hairgrass,Tufted Grass,Orchard No status Deschampsia cespitosa Dactylis glomerata **FACU** % Species that are OBL, FACW, or FAC (except FAC-): Cowardin Classification: Remarks: Less than 50% FAC or wetter Hydrology Primary Wetland Hydrology Indicators Secondary Hydrology Indicators [] Recorded Data (describe in remarks) [] Inundated [] Oxidized root channels [] Stream, Lake, or Tide Gage [] Saturated in upper 12 inches [] Water-stained leaves [] Aerial Photograph [] Water marks [] Local soil survey data [] Other (describe in remarks) [] Drift lines [] FAC-Neutral test [] Sediment deposits [] Other (explain in remarks) Field Observations: [] Drainage patterns in wetlands Depth of Surface Water(in.): 0 Depth to Free Water in Pit(in.): >16 Depth to Saturated Soils(in.): >16 Remarks Soils Depth Hor. Matrix Mottle / 2nd Mottle Texture, Abundance Contrast (in.) Color Structure, etc. 0-16 10YR 4/1 Sandy Clay Loam Fine Subangular Blocky Hydric Soils Indicators [] Histosol [] Concretions [] Histic Epipedon [] High Organic % in Surface Layer [] Sulfidic Odor [] Organic Streaking [] Probable Aquatic Moist Regime [] Listed on Local Hydric Soils List [] Reducing Conditions] Listed on National Hydric Soils List [X] Gleyed or Low-Chroma Colors [] Other (explain in remarks) Unit Name: C3s Corvallis silt loam slightly saline Taxonomy: Fluvauqentic Haploborolls Drainage Class: Somewhat poorly drained [] Field Observations match map Remarks

[] This Data Point is a Wetland

Wetland Determination

[X] Hydric Soils Present
[] Wetland Hydrology Present

Remarks

[] Hydrophytic Vegetation Present

Remarks

Job Number: 0877.008.010.0310

City: Hamilton

Wetland Data Point: W-10-03-wl.

Project/Site: Ravalli Co. Airport Applicant/Owner: Ravalli County Investigator: SR/EN [X] Do normal circumstances exist on the site? [] Have vegetation, soils, or hydrology been dist [] Is the area a potential problem area?		Date: October 28, 2004 County: Ravalli State: MT Community ID: Wetland Station ID: S-10-03 Plot ID: 1
Vegetation		
Dominant Species	Common Name	% Cover Indicator
Herbaceous		
Juncus balticus	Rush,Baltic	FACW+
Carex nebrascensis	Sedge,Nebraska	OBL
Rumex crispus	Dock, Curly	FAC+
Deschampsia cespitosa	Hairgrass,Tufted	FACW
Juncus tenuis	Rush,Slender	rardin Classification:
% Species that are OBL, FACW, or FAC (except Remarks: Greater than 50% FAC or wetter	FAC-).	arom Gassincation.
Hydrology	Primary Wetland Hydrology Indicators	
[] Recorded Data (describe in remarks)	[] Inundated	[] Oxidized root channels
[] Stream, Lake, or Tide Gage	[] Saturated in upper 12 inches	[] Water-stained leaves
[] Aerial Photograph	[] Water marks	[] Local soil survey data
Other (describe in remarks)	[] Drift lines	[X] FAC-Neutral test
* 5 5 50 50 50000 100*0	[] Sediment deposits	[] Other (explain in remarks)
Field Observations:	[X] Drainage patterns in wetlands	[] outer (explain in termaine)
Depth of Surface Water(in.): 0	[X] Drainage patterns in wettands	
Depth to Free Water in Pit(in.): >16		
Depth to Saturated Soils(in.): >16		
Remarks		
Soils		
Depth Hor. Matrix Mottle / 2nd M		kture,
(in.) Color Color	The state of the s	ucture, etc.
0-12 A 10YR 2/1	Sai	ndy Clay Loam Medium Subangular Blocky
Hydric Soils Indicators		
[] Histosol	[] Concretions	
[] Histic Epipedon	[] High Organic % in Su	rface Layer
[] Sulfidic Odor	[] Organic Streaking	
[] Probable Aquatic Moist Regime	[] Listed on Local Hydric	c Soils List
[] Reducing Conditions	Listed on National Hy	
[X] Gleyed or Low-Chroma Colors	Other (explain in remains	
[A] Gieyed of Low-Officitia Colors	[] Other (explain in rema	sino)
Unit Name:C3v Corvallis silt loam mod shallo Drainage Class: Slightly poorly drained	ow slight saline Taxonomy: Fluvaqu [] Field Observation	40.00 M. PATOR - 0-1 AND ASPEC ■ CI-MEN CHAIN CONTROL OF CONTROL
Remarks		
Wetland Determination		· · · · · · · · · · · · · · · · · · ·
[X] Hydrophytic Vegetation Present	[X] This Data Point is a V	Vetland
[X] Hydric Soils Present		
[X1 Wetland Hydrology Present		

Job Number: 0877.008.010.0310 **Data Form** City: Hamilton **Routine Wetland Determination** Wetland Data Point: W-10-03-upl. Date: October 28, 2004 Project/Site: Ravalli Co. Airport Applicant/Owner: Ravalli County County: Ravalli State: MT Investigator: SR/EN [X] Do normal circumstances exist on the site? Community ID: Upland Station ID: S-10-03 [] Have vegetation, soils, or hydrology been disturbed? Plot ID: 2 [] Is the area a potential problem area? Vegetation Dominant Species Common Name % Cover Indicator **Herbaceous** FAC Poa palustris Bluegrass, Fowl Phleum pratense Timothy FAC-Mustard, Tall Tumble FACU-Sisymbrium altissimum FACU+ Cirsium arvense Thistle, Creeping % Species that are OBL, FACW, or FAC (except FAC-): Cowardin Classification: Remarks: Less than 50% FAC or wetter Hydrology Secondary Hydrology Indicators Primary Wetland Hydrology Indicators [] Recorded Data (describe in remarks) [] Inundated [] Oxidized root channels [] Saturated in upper 12 inches [] Water-stained leaves [] Stream, Lake, or Tide Gage [] Local soil survey data [] Water marks [] Aerial Photograph [] FAC-Neutral test [] Other (describe in remarks) [] Drift lines [] Other (explain in remarks) [] Sediment deposits Field Observations: [] Drainage patterns in wetlands Depth of Surface Water(in.): 0 Depth to Free Water in Pit(in.): >16 Depth to Saturated Soils(in.): >16 Remarks Soils Depth Hor, Matrix Mottle / 2nd Mottle Texture, Contrast Structure, etc. Color Abundance (in.) Sandy Clay Loam Medium Subangular Blocky 2.5Y 3/2 0 - 12Sandy Clay Loam Medium Subangular Blocky 12-16 A 2.5Y 4/3 Hydric Soils Indicators [] Histosol [] Concretions [] Histic Epipedon [] High Organic % in Surface Layer [] Sulfidic Odor [] Organic Streaking [] Probable Aquatic Moist Regime [] Listed on Local Hydric Soils List [] Listed on National Hydric Soils List [] Reducing Conditions [] Gleyed or Low-Chroma Colors [] Other (explain in remarks) Unit Name: C3s Corvallis silt loam slightly saline Taxonomy: Fluvauqentic Haploborolls

Wetland Determination

[] Hydrophytic Vegetation Present

Drainage Class: Somewhat poorly drained

- [] Hydric Soils Present
- [] Wetland Hydrology Present

Remarks

Remarks

[] This Data Point is a Wetland

[] Field Observations match map

Job Number: 0877.008.010.0310

City: Hamilton

Wetland Data Point: W-11-03-wl.

Project/Site: Ravalli Co. Airport Applicant/Owner: Ravalli County Investigator: SR/EN [X] Do normal circumstances exist on the site? [] Have vegetation, soils, or hydrology been dis [] Is the area a potential problem area?	slurbed?	Date: October 28, 2004 County: Ravalli State: MT Community ID: Wetland Station ID: S-11-03 Plot ID: 1	
Vegetation			
Dominant Species Herbaceous	Common Name	% Cover	Indicator
Solanum dulcamara Conium Maculatum Cirsium arvense Mentha arvensis Glyceria grandis Phalaris arundinacea Typha latifolia Species that are OBL, FACW, or FAC (except	Nightshade,Climbing Poison-Hemlock Thistle,Creeping Mint,Field Grass,American Manna Grass,Reed Canary Cattail,Broad-Leaf FAC-): Co	wardin Classification:	FAC+ FAC+ FACU+ FACW- No status FACW OBL
Hydrology [] Recorded Data (describe in remarks) [] Stream, Lake, or Tide Gage [] Aerial Photograph [] Other (describe in remarks) Field Observations: Depth of Surface Water(in.): 6 Depth to Free Water in Pit(in.): 0 Depth to Saturated Soils(in.): 0 Remarks	Primary Wetland Hydrology Indicator [X] Inundated [X] Saturated in upper 12 inches [] Water marks [] Drift lines [] Sediment deposits [] Drainage patterns in wetlands	[] Oxidized root [] Water-stained [] Local soil surv [X] FAC-Neutral t [] Other (explain	channels leaves rey data est
Soils			
Depth Hor. Matrix (in.) Mottle / 2nd I Color 0-8 A 10YR 2/1	Abundance Contrast St	xture, ructure, etc. indy Loam Fine Subangular E	llocky
Hydric Soils Indicators [] Histosol [] Histic Epipedon [] Sulfidic Odor [] Probable Aquatic Moist Regime [] Reducing Conditions [X] Gleyed or Low-Chroma Colors	[] Concretions [] High Organic % in S [] Organic Streaking [] Listed on Local Hydr [] Listed on National H [] Other (explain in rem	ic Soils List ydric Soils List arks)	
Unit Name: G2n Grantsdale Loam, level Drainage Class: Well Drained	Taxonomy: Calciorthidic I [] Field Observations mate		
Remarks 8+ inches was rock/gravel			
Wetland Determination			
[X] Hydrophytic Vegetation Present[X] Hydric Soils Present[X] Wetland Hydrology PresentRemarks	[X] This Data Point is a	Wetland	

Job Number: 0877.008.010.0310

City: Hamilton

Wetland Data Point: W-11-03-upl.

Project/Site: Ravalli Co. Airpor Applicant/Owner: Ravalli Coun Investigator: SR/EN [X] Do normal circumstances ex [] Have vegetation, soils, or hy [] Is the area a potential proble Vegetation Dominant Species	ty ist on the site? drology been disturbed?	Common Name	Date: October 28, 2004 County: Ravalli State: MT Community ID: Upland Station ID: S-11-03 Plot ID: 2	Indicator
Herbaceous				
Rosa woodsii		Wood's rose		FACU
Geranium richards Dactylis glomerata		Crane's-Bill,Richardson's Grass,Orchard		FAC- FACU
<u>Shrub</u> Symphoricarpos a	lhus	Snowberry		FACU
% Species that are OBL, FACW Remarks: Less than 50% FAC	, or FAC (except FAC-):		wardin Classification:	
Hydrology	Prima	ry Wetland Hydrology Indicato	rs Secondary Hydrolog	y Indicators
[] Recorded Data (describe in		Inundated	[] Oxidized root	
[] Stream, Lake, or Tid	e Gage []	Saturated in upper 12 inches	[] Water-stained	
[] Aerial Photograph		Water marks	[] Local soil surv	ā.,.
[] Other (describe in re		Drift lines	[] FAC-Neutral t [] Other (explain	
Field Observations: Depth of Surface Water(Depth to Free Water in F Depth to Saturated Soils	in.): 0 Pit(in.): >16] Sediment deposits] Drainage patterns in wetlands		in renaixs)
Remarks				
Soils				
Depth Hor. Matrix (in.) Color	Mottle / 2nd Mottle Color Ab		exture, tructure, etc.	*
0-14 A 10YR 3/3		Sa	andy Loam Fine Subangular E	Blocky
Hydric Soils Indicators [] Histosol [] Histic Epipedon [] Sulfidic Odor [] Probable Aquatic Moist [] Reducing Conditions [] Gleyed or Low-Chroma		[] Concretions [] High Organic % in S [] Organic Streaking [] Listed on Local Hyd [] Listed on National H [] Other (explain in rer	ric Soils List lydric Soils List	
Unit Name: G2n Grantsdale Drainage Class: Well Draine		Taxonomy: Calciorthidic [] Field Observations materials		
Remarks				
Wetland Determination	1			
[] Hydrophytic Vegetation Pr [] Hydric Soils Present [] Wetland Hydrology Present Remarks	resent	[] This Data Point is a	Wetland	

Job Number: 0877.008.010.0310 **Data Form** City: Hamilton **Routine Wetland Determination** Wetland Data Point: W-12-03-wl. Project/Site: Ravalli Co. Airport Date: October 28, 2004 Applicant/Owner: Ravalli County County: Ravalli State: MT Investigator: SR/EN [X] Do normal circumstances exist on the site? Community ID: Wetland Station ID: S-12-03 [] Have vegetation, soils, or hydrology been disturbed? [] Is the area a potential problem area? Plot ID: 1 Vegetation Dominant **Species** Common Name % Cover Indicator **Herbaceous** FACU+ Cirsium arvense Thistle, Creeping Glyceria grandis Grass, American Manna No status FACW-Avens, Large-Leaf Geum macrophyllum Carex nebrascensis Sedge, Nebraska OBL Phalaris arundinacea Grass, Reed Canary **FACW** FAC+ Ribes lacustre Currant, Prickly Tree

Hydrology Primary Wetland Hydrology Indicators Secondary Hydrology Indicators [] Recorded Data (describe in remarks) [] Oxidized root channels [X] Inundated [] Water-stained leaves [] Stream, Lake, or Tide Gage [X] Saturated in upper 12 inches [] Aerial Photograph [] Water marks [] Local soil survey data [] Other (describe in remarks) [] Drift lines [X] FAC-Neutral test [] Sediment deposits [] Other (explain in remarks) Field Observations: [X] Drainage patterns in wetlands Depth of Surface Water(in.): 4 Depth to Free Water in Pit(in.): 0

Poplar, Balsam

FAC

Cowardin Classification:

Remarks

Depth	Hor.	Matrix	Mottle / 2nd Mott	le		Texture,
(in.)		Color	Color	Abundance	Contrast	Structure, etc.
0-16	Α	10YR 3/1				Sandy Loam Fine Subangular Blocky
 Hydric	Soils I	ndicators		THE RESERVE AMERICAN IN THE PERSON OF THE PE		
[]	Histos	ol		[]	Concretions	
[]	Histic I	Epipedon		[]	High Organic ¹	% in Surface Layer
[]	Sulfidio	c Odor		[]	Organic Strea	king
[]	Probal	ble Aquatic Moi	st Regime	[]	Listed on Loca	al Hydric Soils List
[]	Reduc	ing Conditions		[]	Listed on Nation	onal Hydric Soils List
[X]	Gleyed	d or Low-Chron	na Colors	[]	Other (explain	in remarks)
Unit N	ame: (C3s Corvallis s	silt loam slightly salin	e Taxon	omy: Fluvauq	entic Haploborolls
Draina	ge Cla	ss: Somewhat	poorly drained	[] Fie	ld Observation	ns match map

Wetland Determination

[X] Hydrophytic Vegetation Present

Populus balsamifera

Depth to Saturated Soils(in.): 0

Remarks: Greater than 50% FAC or wetter

% Species that are OBL, FACW, or FAC (except FAC-):

[X] Hydric Soils Present

[X] Wetland Hydrology Present

Remarks

Remarks

[X] This Data Point is a Wetland

Job Number: 0877.008.010.0310 **Data Form** City: Hamilton Wetland Data Point: W-12-03-upl. **Routine Wetland Determination** Project/Site: Ravalli Co. Airport Date: October 28, 2004 Applicant/Owner: Ravalli County County: Ravalli Investigator: SR/EN State: MT [X] Do normal circumstances exist on the site? Community ID: Upland [] Have vegetation, soils, or hydrology been disturbed? Station ID: S-12-03 [] Is the area a potential problem area? Plot ID: 2 Vegetation Dominant Species % Cover Indicator Common Name Herbaceous FACU+ Cirsium arvense Thistle, Creeping Centaurea maculosa Knapweed, Spotted No Status Senecio serra Groundsel, Butterweed **FACU** Cynoglossum officinale **FACU** Houndstongue % Species that are OBL, FACW, or FAC (except FAC-): Cowardin Classification: Remarks: Less than 50% FAC or wetter Hydrology Secondary Hydrology Indicators Primary Wetland Hydrology Indicators [] Recorded Data (describe in remarks) [] Inundated [] Oxidized root channels [] Stream, Lake, or Tide Gage [] Saturated in upper 12 inches [] Water-stained leaves [] Aerial Photograph] Water marks [] Local soil survey data [] Other (describe in remarks) [] Drift lines [] FAC-Neutral test

[] Sediment deposits

[] Drainage patterns in wetlands

Remarks

Soils

Field Observations:

Depth of Surface Water(in.): 0 Depth to Free Water in Pit(in.): >16 Depth to Saturated Soils(in.): >16

Depth	Hor.	Matrix	Mottle / 2nd	l Mottle		Texture,
(in.)		Color	Color	Abundance	Contrast	Structure, etc.
0-14	0-14 A 10YR 3/2			Sandy Loam Fine S		
Hydric	Soils I	ndicators				
[]	Histos	ol		[]	Concretions	
[]	Histic	Epipedon		[]	High Organic	% in Surface Layer
[]	Sulfidi	c Odor		[]	Organic Stream	king
[]	Probal	ole Aquatic Moi	st Regime	[]	Listed on Loca	al Hydric Soils List
. []	Reduc	ing Conditions		[]	Listed on Nation	onal Hydric Soils List
[]	Gleye	d or Low-Chron	na Colors	[]	Other (explain	in remarks)

Remarks

MAt	and	Doto	rmin	ation

[] Hydrophytic Vegetation Present [] Hydric Soils Present

Unit Name: C3s Corvallis silt loam slightly

Drainage Class: Somewhat poorly drained

- [] Wetland Hydrology Present

Remarks

ſ	1 This	Data	Point	isa	Wellan	1
	111110	Data	1 OILIE	10 0	AACHGII	٠

Taxonomy: Fluvaugentic Haploborolls

[] Field Observations match map

[] Other (explain in remarks)

Job Number: 0877.008.010.0310

City: Hamilton

Wetland Data Point: W-13-03-wl.

Project/Site: Ravalli Co. Airport Applicant/Owner: Ravalli County Investigator: SR/EN [X] Do normal circumstances exist on the site? [] Have vegetation, soils, or hydrology been disturbed? [] Is the area a potential problem area?		Date: October 28, 2004 County: Ravalli State: MT Community ID: Wetland Station ID: S-13-03 Plot ID: 1	, , , , , , , , , , , , , , , , , , ,
Vegetation			V. W. J.
Dominant Species Herbaceous	Common Name	% Cover	Indicator
Poa palustris Phalaris arundinacea Deschampsia cespitosa Rumex crispus Carex nebrascensis Cirsium arvense Shrub Salix spp. Rosa woodsii Tree Populus tremula % Species that are OBL, FACW, or FAC (except FAC-): Remarks: Greater than 50% FAC or wetter	Bluegrass,Fowl Grass,Reed Canary Hairgrass,Tufted Dock,Curly Sedge,Nebraska Thistle,Creeping Willow,spp. Rose,Woods Aspen,Quaking Cov	wardin Classification:	FAC FACW FACW FAC+ OBL FACU+ NI, OBL- FACU
Hydrology Prima	ry Wetland Hydrology Indicator	s Secondary Hydrology	/ Indicators
[] Recorded Data (describe in remarks) [[] Stream, Lake, or Tide Gage [] Aerial Photograph [] Other (describe in remarks) [] Field Observations:	Inundated Saturated in upper 12 inches Water marks Drift lines Sediment deposits Drainage patterns in wetlands	[] Oxidized root of a survey of the control of the	channels leaves ey data est
Calle			
Soils	T-	·············	
Depth Hor. Matrix Mottle / 2nd Mottle (in.) Color Color Ab		xture, ructure, etc.	
0-12 A 10YR 3/1		ay Loam Medium Subangular I	Blocky
Hydric Soils Indicators [] Histosol [] Histic Epipedon [] Sulfidic Odor [] Probable Aquatic Moist Regime [] Reducing Conditions [X] Gleyed or Low-Chroma Colors Unit Name: C3s Corvallis silt loam slightly saline Drainage Class: Somewhat poorly drained Remarks	[] Concretions [] High Organic % in State of Local Hydric on National Hygin of Local Hydric on National Hygin of Local of Local of Local on National Hygin of Local	ic Soils List ydric Soils List aarks) Haploborolls	
Wetland Determination	***		
[X] Hydrophytic Vegetation Present[X] Hydric Soils Present[X] Wetland Hydrology PresentRemarks	[X] This Data Point is a \	Wetland	

Job Number: 0877.008.010.0310

City: Hamilton

Wetland Data Point: W-13-03-upl.

Project/Site: Ravalli Co. Airport Applicant/Owner: Ravalli County Investigator: SR/EN [X] Do normal circumstances exist on the site? [] Have vegetation, soils, or hydrology been dis [] Is the area a potential problem area?	turbed?	Date: October 28, 2004 County: Ravalli State: MT Community ID: Upland Station ID: S-13-03 Plot ID: 2	
Vegetation			
Dominant Species Herbaceous	Common Name	% Cover	Indicator
Carduus nutans Centaurea maculosa Cirsium arvense Tanacetum vulgare Shrub	Musk thistle Knapweed, Spotted Thistle,Creeping Tansy,Common		No status No Status FACU+ NI
Symphoricarpos albus	Snowberry		FACU
Rosa woodsii	Rose,Woods	untdin Classification	FACU
% Species that are OBL, FACW, or FAC (except Remarks: Less than 50% FAC or wetter	FAC-):	wardin Classification:	
Remarks. Less man 50% FAC of wetter			
Hydrology [] Recorded Data (describe in remarks)	Primary Wetland Hydrology Indicator	[] Oxidized root	channels
[] Stream, Lake, or Tide Gage	[] Saturated in upper 12 inches	[] Water-stained	
[] Aerial Photograph [] Other (describe in remarks)	[] Water marks [] Drift lines	[] Local soil surv [] FAC-Neutral t	
	[] Sediment deposits	[] Other (explain	
Field Observations:	Drainage patterns in wetlands		in romano,
Depth of Surface Water(in.): 0	[,		
Depth to Free Water in Pit(in.): >16 Depth to Saturated Soils(in.): >16			
Remarks			
Remarks			
Soils			-
Depth Hor. Matrix Mottle / 2nd M (in.) Color Color 0-16 A 10YR 3/2	Abundance Contrast St	xture, ructure, etc. nndy Clay Loam Medium Suba	ngular Blocky
Hydric Soils Indicators [] Histosol [] Histic Epipedon [] Sulfidic Odor [] Probable Aquatic Moist Regime [] Reducing Conditions [] Gleyed or Low-Chroma Colors	[] Concretions [] High Organic % in S [] Organic Streaking [] Listed on Local Hydr [] Listed on National H [] Other (explain in rem	ic Soils List ydric Soils List	
Unit Name: C3s Corvallis silt loam slightly Drainage Class: Somewhat poorly drained	Taxonomy: Fluvauqentic [] Field Observations mate		
Remarks			
Wetland Determination			
[] Hydrophytic Vegetation Present [] Hydric Soils Present [] Wetland Hydrology Present Remarks	[] This Data Point is a	Wetland	

Remarks

Job Number: 0877.008.010.0310

City: Hamilton

Wetland Data Point: W-14-03-wl.

Project/Site: Ravalli Co. Airport		Date: October 28, 2004	
Applicant/Owner: Ravalli County		County: Ravalli	
Investigator: SR/EN		State: MT	_
[X] Do normal circumstances exist on the site?		Community ID: Wetland	
[] Have vegetation, soils, or hydrology been distur	bed?	Station ID: S-14-03	
[] Is the area a potential problem area?		Plot ID: 1	
Vegetation		*4	
Dominant Species	Common Name	% Cover Inc	dicator
Herbaceous Pholoria arundinassa	O D1 O	-	0144
Phalaris arundinacea Tanacetum vulgare	Grass, Reed Canary Tansy, Common	FA NI	CW
Senecio serra	Groundsel,Butterweed		CU
<u>Shrub</u>		• • •	.00
Symphoricarpos albus	Snowberry		CU
% Species that are OBL, FACW, or FAC (except FA	(C-): Co	wardin Classification:	
Remarks: Greater than 50% FAC or wetter			
Hydrology	Primary Wetland Hydrology Indicato	rs Secondary Hydrology Inc	licators
[] Recorded Data (describe in remarks)	[] Inundated	[] Oxidized root char	nnels
[] Stream, Lake, or Tide Gage	[] Saturated in upper 12 inches	[] Water-stained leav	/es
[] Aerial Photograph	[] Water marks	[] Local soil survey of	lata
[] Other (describe in remarks)	[] Drift lines	[] FAC-Neutral test	
Field Observations:	[] Sediment deposits	[] Other (explain in re	emarks)
Depth of Surface Water(in.): 0	[X] Drainage patterns in wetlands	3	
Depth to Free Water in Pit(in.): >14			
Depth to Saturated Soils(in.): >14			
Deptit to Saturated Solis(iii.). 714			
Remarks			
Soils			
Depth Hor. Matrix Mottle / 2nd Mot	tle To	exture,	
(in.) Color Color		ructure, etc.	
0-14 A 10YR 3/1	The second secon	andy Clay Loam Fine Subangular I	Blocky
		,,	-,,,
Hydric Soils Indicators			
[] Histosol	[] Congretions		
•	[] Concretions		
[] Histic Epipedon	[] High Organic % in S	urrace Layer	
[] Sulfidic Odor	[] Organic Streaking		
[] Probable Aquatic Moist Regime	[] Listed on Local Hydi		
[] Reducing Conditions	[] Listed on National H	e	
[X] Gleyed or Low-Chroma Colors	[] Other (explain in ren	narks)	
Unit Name: B3f Burnt Fork Loam, Level	Taxonomy: Aridic Haplob		
Drainage Class: Well Drained	[] Field Observations mat	сп тар	
Remarks			
Wetland Determination			(1000 -
[X] Hydrophytic Vegetation Present[X] Hydric Soils Present[X] Wetland Hydrology Present	[X] This Data Point is a	Wetland	

Job Number: 0877.008.010.0310

City: Hamilton

Wetland Data Point: W-14-03-upl.

Project/Site: Ravalli Co. Airport			
		Date: October 28, 2004	
Applicant/Owner: Ravalli County		County: Ravalli	
Investigator: SR/EN		State: MT	TO ARREST STORY CONTRACTOR
[X] Do normal circumstances exist on the site?		Community ID: Upland	
[] Have vegetation, soils, or hydrology been dist	urbed?	Station ID: S-14-03	
[] Is the area a potential problem area?		Plot ID: 2	
Vegetation			101 10111111111111111111111111111111111
Dominant Species	Common Name	% Cover	Indicator
Herbaceous		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Tanacetum vulgare	Tansy,Common		NI
Senecio serra	Groundsel, Butterweed		FACU
Taraxacum officinale	Dandelion, Common		FACU
Festuca arundinacea Medicago sativa	Fescue,Kentucky Alfalfa		FAC-
Shrub	Allalla		
Symphoricarpos albus	Snowberry		FACU
% Species that are OBL, FACW, or FAC (except I		owardin Classification:	V 100 - 0 000 - 0
Remarks: Less than 50% FAC or wetter			
Hydrology			
	Primary Wetland Hydrology Indicate		
[] Recorded Data (describe in remarks)	[] Inundated	[] Oxidized root	channels
[] Stream, Lake, or Tide Gage	[] Saturated in upper 12 inches	[] Water-stained	leaves
[] Aerial Photograph	[] Water marks	[] Local soil surv	ey data
[] Other (describe in remarks)	[] Drift lines	[] FAC-Neutral to	est
Field Observations:	[] Sediment deposits	[] Other (explain	in remarks)
	[] Drainage patterns in wetland	s	
Depth of Surface Water(in.): 0			
Depth to Free Water in Pit(in.): >16			
Depth to Salurated Soils(in.): >16			
Remarks			
1 tolliante			
Soils			
Soils			
Depth Hor. Matrix Mottle / 2nd M		exture,	
Depth Hor. Matrix Mottle / 2nd M (in.) Color Color	Abundance Contrast S	tructure, etc.	- Di-
Depth Hor. Matrix Mottle / 2nd M	Abundance Contrast S	•	ngular Blocky
Depth Hor. Matrix Mottle / 2nd M (in.) Color Color	Abundance Contrast S	tructure, etc.	ngular Blocky
Depth (in.) Hor. Matrix Mottle / 2nd M 0-16 A 10YR 3/2	Abundance Contrast S	tructure, etc.	ngular Blocky
Depth (in.) Hor. Matrix Color Mottle / 2nd M Color 0-16 A 10YR 3/2 Hydric Soils Indicators	Abundance Contrast S	tructure, etc.	ngular Blocky
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Job Number: 0877.008.010.0310

City: Hamilton

Wetland Data Point: W-15-04-wl.

Project/Site: Ravalli Co. Airport Applicant/Owner: Ravalli County Investigator: [X] Do normal circumstances exist on the site? [] Have vegetation, soils, or hydrology been distu [] Is the area a potential problem area?	rbed?	Date: October 27, 2004 County: Ravalli State: MT Community ID: Wetland Station ID: S-15-04 Plot ID: 1	
Vegetation			
Dominant Species	Common Name	% Cover	Indicator
Herbaceous Juncus balticus Veronica americana Conium maculatum Dactylis glomerata Tanacetum vulgare Equisetum arvense Rumex crispus Glyceria grandis Carex rostrata % Species that are OBL, FACW, or FAC (except F. Remarks: Greater than 50% FAC or wetter	Rush,Baltic Speedwell,American Poison-Hemlock Grass,Orchard Tansy,Common Horsetail,Field Dock,Curly Grass,American Manna Sedge,Beaked AC-): Co	owardin Classification:	FACW+ OBL FAC+ FACU NI FAC FAC FAC+ No status OBL
[] Recorded Data (describe in remarks) [] Stream, Lake, or Tide Gage [] Aerial Photograph [] Other (describe in remarks) Field Observations: Depth of Surface Water(in.): 0 Depth to Free Water in Pit(in.): >16 Depth to Saturated Soils(in.): >16	Primary Wetland Hydrology Indicator [] Inundated [] Saturated in upper 12 inches [] Water marks [] Drift lines [] Sediment deposits [X] Drainage patterns in wetlands	[] Oxidized root [] Water-stained [] Local soil sun [X] FAC-Neutral [] Other (explain	channels I leaves vey data test
Remarks Ditch			
Soils			
Depth Hor. Matrix Mottle / 2nd Motile / 2nd	Abundance Contrast St	exture, tructure, etc. andy Loam Medium Subangula	ar Blocky
Hydric Soils Indicators [] Histosol [] Histic Epipedon [] Sulfidic Odor [] Probable Aquatic Moist Regime [] Reducing Conditions [X] Gleyed or Low-Chroma Colors	[] Concretions [] High Organic % in S [] Organic Streaking [] Listed on Local Hydi [] Listed on National H [] Other (explain in ren	ric Soils List lydric Soils List	
Unit Name: Rm Riverside cobbly sandy loam : Drainage Class: Excessively drained	sloping Taxonomy: Entic Haplobo [] Field Observations mat		
Remarks			
Wetland Determination			
[X] Hydrophytic Vegetation Present[X] Hydric Soils Present[X] Wetland Hydrology PresentRemarks	[X] This Data Point is a \	Wetland	

Job Number: 0877.008.010.0310 Data Form City: Hamilton **Routine Wetland Determination** Wetland Data Point: W-15-04-upl. Project/Site: Ravalli Co. Airport Date: October 27, 2004 Applicant/Owner: Ravalli County County: Ravalli Investigator: SR/EN State: MT [X] Do normal circumstances exist on the site? Community ID: Upland [] Have vegetation, soils, or hydrology been disturbed? Station ID: S-15-04 [] Is the area a potential problem area? Plot ID: 2 Vegetation Dominant Species Common Name % Cover Indicator **Herbaceous** Tanacetum vulgare Centaurea maculosa Tansy, Common Knapweed, Spotted No Status Dactylis glomerata Grass, Orchard **FACU** % Species that are OBL, FACW, or FAC (except FAC-): Cowardin Classification: Remarks: Less than 50% FAC or wetter Hydrology Primary Wetland Hydrology Indicators Secondary Hydrology Indicators [] Recorded Data (describe in remarks) [] Inundated [] Oxidized root channels [] Stream, Lake, or Tide Gage [] Saturated in upper 12 inches [] Water-stained leaves [] Aerial Photograph [] Water marks [] Local soil survey data [] Other (describe in remarks) [] Drift lines [] FAC-Neutral test [] Sediment deposits [] Other (explain in remarks) Field Observations: [] Drainage patterns in wetlands Depth of Surface Water(in.): 0 Depth to Free Water in Pit(in.): >16 Depth to Saturated Soils(in.): >16 Remarks Soils Depth Hor. Matrix Mottle / 2nd Mottle Texture Color (in.) Color Abundance Contrast Structure, etc. 0-16 10YR 3/2 Sandy Loam Coarse Subangular Blocky Hydric Soils Indicators [] Histosol [] Concretions [] Histic Epipedon [] High Organic % in Surface Layer [] Sulfidic Odor [] Organic Streaking [] Probable Aquatic Moist Regime [] Listed on Local Hydric Soils List [] Reducing Conditions [] Listed on National Hydric Soils List [] Gleyed or Low-Chroma Colors [] Other (explain in remarks) Unit Name: Rm Riverside cobbly sandy loam sloping Taxonomy: Entic Haploborolls Drainage Class: Excessively drained [] Field Observations match map

[] This Data Point is a Wetland

Remarks

Remarks

Wetland Determination

[] Hydric Soils Present[] Wetland Hydrology Present

[] Hydrophytic Vegetation Present

Job Number: 0877.008.010.0310

City: Hamilton

Wetland Data Point: W-16-04-wl.

Project/Site: Ravalli Co. Airport		Date: October 27, 2004	
Applicant/Owner: Ravalli County		County: Ravalli	
Investigator: SR/EN		State: MT	
[X] Do normal circumstances exist on the site?		Community ID: Wetland	
[] Have vegetation, soils, or hydrology been disturbed?		Station ID: S-16-04	
[] is the area a potential problem area?		Plot ID: 1	19
Vegetation			
Dominant Species	Common Name	% Cover	Indicator
<u>Herbaceous</u>			
Typha angustifolia	Cattail,Narrow-Leaf		OBL
Equisetum laevigatum Juncus balticus	Scouring-Rush,Smooth Rush,Baltic		FACW FACW+
Deschampsia cespitosa	Hairgrass,Tufted		FACW
Poa palustris	Bluegrass, Fowl		FAC
Carex nebrascensis	Sedge,Nebraska		OBL
% Species that are OBL, FACW, or FAC (except FAC-):	Cov	wardin Classification:	
Remarks: Greater than 50% FAC or wetter			
Hydrology Prima	ry Wetland Hydrology Indicator	s Secondary Hydrology	/ Indicators
	Inundated	[X] Oxidized root	
	Saturated in upper 12 inches	[] Water-stained	
	Water marks	[] Local soil surv	
	Drift lines	[X] FAC-Neutral to	20-0 C 130 2-013-00-120-
The production proof. The profession of reference by providing the provided many and constitution of the pro-	Sediment deposits	[] Other (explain	
Field (Inservations:	Drainage patterns in wetlands	(5) (5)	in remarks)
Depth of Surface Water(in.): 0	Diamage patterns in wellands		
Depth to Free Water in Pit(in.): >16			
Depth to Saturated Soils(in.): 10			
Domarka			
Remarks			
Soils			***************************************
		T	
Depth Hor. Matrix Mottle / 2nd Mottle		xture,	
(in.) Color Color Ab 0-16 A 10YR 3/1	THE PARTY OF THE P	ructure, etc. indy Clay Loam Fine Subangi	ılar Blocky
0-10 A 1011(3/1	G.	indy Clay Loan Time Subangi	dai blocky
			and the second second section of the second
Hydric Soils Indicators			
[] Histosol	[] Concretions		
[] Histic Epipedon	[] High Organic % in Si	urface Layer	
[] Sulfidic Odor	[] Organic Streaking		
[] Probable Aquatic Moist Regime	[] Listed on Local Hydr	ic Soils List	
[] Reducing Conditions	[] Listed on National H		
[X] Gleyed or Low-Chroma Colors	Other (explain in rem		
		3.T.O.	
Unit Name:C3t Corvallis silt loam moderately saline			
Drainage Class: Poorly drained	[] Field Observations mate	ch map	
Remarks			
		7-	
Wetland Determination			
	IVI This Data Daint is a 1	Mottand	
[X] Hydrophytic Vegetation Present	[X] This Data Point is a	vveuand	
[X] Hydric Soils Present			
[X] Wetland Hydrology Present			
Remarks			

Job Number: 0877.008.010.0310

City: Hamilton

Wetland Data Point: W-16-04-upl.

Project/Site: Ravalli Co. Airport Applicant/Owner: Ravalli County Investigator: SR/EN [X] Do normal circumstances exist on the site? [] Have vegetation, soils, or hydrology been dis [] Is the area a potential problem area? Vegetation Dominant Species	lurbed? Common Name	Date: October 27, 2004 County: Ravalli State: MT Community ID: Upland Station ID: S-16-04 Plot ID: 2	Indicator
<u>Herbaceous</u> Sisymbrium altissimum Poa palustris	Tumble-mustard Bluegrass,Fowl		NI FAC
Equisetum laevigatum	Scouring-Rush, Smooth		FACW
<u>Shrub</u> Rosa woodsii	Rose,Woods		FACU
% Species that are OBL, FACW, or FAC (except Remarks: Less than 50% FAC or wetter	FAC-): Co	wardin Classification:	
Hydrology	Primary Wetland Hydrology Indicato	rs Secondary Hydrolog	y Indicators
[] Recorded Data (describe in remarks) [] Stream, Lake, or Tide Gage [] Aerial Photograph [] Other (describe in remarks) Field Observations: Depth of Surface Water(in.): 0 Depth to Free Water in Pit(in.): >16 Depth to Saturated Soils(in.): >16 Remarks	[] Inundated [] Saturated in upper 12 inches [] Water marks [] Drift lines [] Sediment deposits [] Drainage patterns in wetlands	[] Oxidized root [] Water-stained [] Local soil surv [] FAC-Neutral t [] Other (explain	leaves ey data est
Soils			
Depth Hor. Matrix Mottle / 2nd M		exture,	
(in.) Color Color 0-16 A 10YR 3/2		tructure, etc. andy Clay Loam Medium Suba	ngular Blocky
Hydric Soils Indicators [] Histosol [] Histic Epipedon [] Sulfidic Odor [] Probable Aquatic Moist Regime [] Reducing Conditions [] Gleyed or Low-Chroma Colors Unit Name: C3t Corvallis silt loam moderatel	[] Concretions [] High Organic % in S [] Organic Streaking [] Listed on Local Hyd [] Listed on National H [] Other (explain in rer y saline Taxonomy: Fluvaquentic	ric Soils List lydric Soils List narks)	
Drainage Class: Poorly drained	[] Field Observations made	ch map	
Remarks			
Wetland Determination [] Hydrophytic Vegetation Present [] Hydric Soils Present [] Wetland Hydrology Present Remarks	[] This Data Point is a	Wetland	

Data Form City: Hamilton **Routine Wetland Determination** Wetland Data Point: W-17-04-wl. Project/Site: Ravalli Co. Airport Date: October 27, 2004 Applicant/Owner: Ravalli County County: Ravalli Investigator: SR/EN State: MT [X] Do normal circumstances exist on the site? Community ID: Wetland [] Have vegetation, soils, or hydrology been disturbed? Station ID: S-17-04 [] Is the area a potential problem area? Plot ID: 1 Vegetation Dominant Species Common Name % Cover Indicator Herbaceous Juncus balticus Rush,Baltic FACW+ Sedge, Small-Wing Carex microptera FAC Hairgrass, Tufted FACW Deschampsia cespitosa Poa palustris Bluegrass, Fowl FAC Carex nebrascensis OBL Sedge, Nebraska % Species that are OBL, FACW, or FAC (except FAC-): Cowardin Classification: Remarks: Greater than 50% FAC or wetter Hydrology Primary Wetland Hydrology Indicators Secondary Hydrology Indicators [] Recorded Data (describe in remarks) [] Inundated [] Oxidized root channels [] Stream, Lake, or Tide Gage [X] Saturated in upper 12 inches [] Water-stained leaves [] Aerial Photograph [] Water marks [] Local soil survey data [] Other (describe in remarks) [] Drift lines [X] FAC-Neutral test [] Sediment deposits [] Other (explain in remarks) Field Observations: [X] Drainage patterns in wetlands Depth of Surface Water(in.): 0 Depth to Free Water in Pit(in.): 2 Depth to Saturated Soils(in.): 0 Remarks Soils Depth Hor, Matrix Mottle / 2nd Mottle Texture, (in.) Color Abundance Structure, etc. 10YR 3/1 0 - 16Fine Sandy Loam Fine Subangular Blocky Hydric Soils Indicators [] Histosol [] Concretions [] Histic Epipedon [] High Organic % in Surface Layer [X] Sulfidic Odor [] Organic Streaking [] Probable Aquatic Moist Regime [] Listed on Local Hydric Soils List [] Reducing Conditions [] Listed on National Hydric Soils List [X] Gleyed or Low-Chroma Colors [] Other (explain in remarks) Unit Name: C3s Corvallis silt loam slightly saline Taxonomy: Fluvaugentic Haploborolls Drainage Class: Somewhat poorly drained [] Field Observations match map

Job Number: 0877.008.010.0310

Wetland Determination

[X] Hydrophytic Vegetation Present

[X] Hydric Soils Present

[X] Wetland Hydrology Present

Remarks

Remarks

[X] This Data Point is a Wetland

Job Number: 0877.008.010.0310

City: Hamilton

Wetland Data Point: W-17-04-upl.

Applicant/Owr Investigator: { [X] Do normal [] Have vege	Ravalli Co. Airport ner: Ravalli County SR/EN I circumstances exist on the site? etation, soils, or hydrology been o a a potential problem area?		Date: October 27, 2004 County: Ravalli State: MT Community ID: Upland Station ID: S-17-04 Plot ID: 2	
Vegetation		_		
Dominant S	Species	Common Name	% Cover	Indicator
	Onopordum acanthium Carduus nutans	scotch thistle musk thistle unknown grass spp.		No status No status
	Lactuca serriola Taraxacum officinale	Lettuce,Prickly Dandelion,Common		FACU FACU
	Rosa woodsii	Rose,Woods	and the contract of the contra	FACU
The state of the s	at are OBL, FACW, or FAC (exce ss than 50% FAC or wetter	pt FAC-): Co	wardin Classification:	
Hydrology		Primary Wetland Hydrology Indicator	rs Secondary Hydrolog	v Indicators
	d Data (describe in remarks)	[] Inundated	[] Oxidized root	•• C.
	ream, Lake, or Tide Gage	[] Saturated in upper 12 inches	[] Water-stained	
-	erial Photograph	[] Water marks	[] Local soil sur	vey data
[]01	her (describe in remarks)	[] Drift lines	[] FAC-Neutral (
Field Observ	vations:	[] Sediment deposits	[] Other (explain	in remarks)
Depth	of Surface Water(in.): 0	[] Drainage patterns in wetlands	•	
	to Free Water in Pit(in.): >16			
Depth	to Saturated Soils(in.): >16			
Remarks				
Soils				
Depth Hor.	. Matrix Mottle / 2n	d Mottle Te	exture,	
(in.)	Color Color		ructure, etc.	
0-16 A	10YR 3/2	Sa	andy Loam Coarse Subangula	r Blocky
Hydric Soils				
[] Histos		[] Concretions	fa.a. I aau	
[] Fistic	Epipedon lic Odor	[] High Organic % in S [] Organic Streaking	urrace Layer	
	able Aquatic Moist Regime	[] Listed on Local Hydr	ic Soils List	
	cing Conditions	[] Listed on National H		
	ed or Low-Chroma Colors	[] Other (explain in rem		
Unit Name:	C3s Corvallis silt loam slightly	Taxonomy: Fluvauqentic	Haploborolls	
Drainage Cla	ass: Somewhat poorly drained	[] Field Observations mate	ch map	
Remarks				
Wetland D	etermination			
[] Hydric S	ytic Vegetation Present oils Present Hydrology Present	[] This Data Point is a	Wetland	

Job Number: 0877.008.010.0310 Data Form City: Hamilton Routine Wetland Determination Wetland Data Point: W-18-04-wl. Project/Site: Ravalli Co. Airport Date: October 28, 2004 Applicant/Owner: Ravalli County County: Ravalli Investigator: SR/EN State: MT [X] Do normal circumstances exist on the site? Community ID: Wetland [] Have vegetation, soils, or hydrology been disturbed? Station ID: S-18-04 [] Is the area a potential problem area? Plot ID: 1 Vegetation Dominant Species Common Name % Cover Indicator Herbaceous Trifolium spp. Deschampsia cespitosa Clover spp. Hairgrass,Tufted NI, FACW+-UPL **FACW** Juncus balticus Rush, Baltic FACW+ Equisetum laevigatum Scouring-Rush, Smooth **FACW** % Species that are OBL, FACW, or FAC (except FAC-): Cowardin Classification: Remarks: Greater than 50% FAC or wetter Hydrology Primary Wetland Hydrology Indicators Secondary Hydrology Indicators [] Recorded Data (describe in remarks) [] Inundated [] Oxidized root channels [] Stream, Lake, or Tide Gage [X] Saturated in upper 12 inches] Water-stained leaves [] Aerial Photograph [] Water marks [] Local soil survey data [X] FAC-Neutral test [] Other (describe in remarks) [] Drift lines [] Sediment deposits [] Other (explain in remarks) Field Observations: [X] Drainage patterns in wetlands Depth of Surface Water(in.): 0 Depth to Free Water in Pit(in.): >16 Depth to Saturated Soils(in.): 0 Remarks Soils Mottle / 2nd Mottle Depth Hor. Matrix Texture, (in.) Color Color Abundance Contrast Structure, etc. 10YR 2/1 0 - 4Sandy Clay Loam Medium Subangular Blocky 4-16 10YR 3/1 Α Sandy Loam Fine Subangular Blocky Hydric Soils Indicators [] Histosol - [] Concretions 1 Histic Epipedon [] High Organic % in Surface Layer [] Sulfidic Odor [X] Organic Streaking [] Probable Aquatic Moist Regime [] Listed on Local Hydric Soils List [] Reducing Conditions [] Listed on National Hydric Soils List [X] Gleyed or Low-Chroma Colors [] Other (explain in remarks)

Wetland Determination

[X] Hydrophytic Vegetation Present

Unit Name: C3s Corvallis silt loam slightly saline

Drainage Class: Somewhat poorly drained

[X] Hydric Soils Present

[X] Wetland Hydrology Present

Remarks

Remarks

[X] This Data Point is a Welland

Taxonomy: Fluvauqentic Haploborolls

[] Field Observations match map

Routine Wetland Determination		City: Hamilton Welland Data Point: W-18-04-upl.			
Project/Site: Ravalli Co. Airport Applicant/Owner: Ravalli County Investigator: SR/EN [X] Do normal circumstances exist on the site? [] Have vegetation, soils, or hydrology been disturbed [] Is the area a potential problem area?	d?	Date: October 28, 2004 County: Ravalli State: MT Community ID: Upland Station ID: S-18-04 Plot ID: 2	-		
Vegetation	F=0 40	1 S			
Dominant Species Herbaceous	Common Name	% Cover	Indicator		
Aster spp. Equisetum laevigatum Lactuca serriola Carduus nutans Agropyron trachycaulum % Species that are OBL, FACW, or FAC (except FAC-Remarks: Less than 50% FAC or wetter	Aster spp. Scouring-Rush,Smooth Lettuce,Prickly Musk thistle Wheatgrass, Slender): Co	wardin Classification:	NI, OBL-UPL FACW FACU No status FAC		
Hydrology Prim	nary Wetland Hydrology Indicator	rs Secondary Hydrolog	. Indicators		
[] Recorded Data (describe in remarks) [[] Stream, Lake, or Tide Gage [[] Aerial Photograph [[] Other (describe in remarks) [Field Observations:] Inundated] Saturated in upper 12 inches] Water marks] Drift lines] Sediment deposits] Drainage patterns in wetlands	[] Oxidized root [] Water-stained [] Local soil surv [] FAC-Neutral t [] Other (explain	channels leaves ey data est		
Soils					
Depth (in.) Hor. Matrix Color Mottle / 2nd Mottle Color 0-16 A 10YR 3/2	bundance Contrast St	exture, ructure, etc. ay Loam Medium Subangular	Blocky		
Hydric Soils Indicators [] Histosol [] Histic Epipedon [] Sulfidic Odor [] Probable Aquatic Moist Regime [] Reducing Conditions [] Gleyed or Low-Chroma Colors	[] Concretions [] High Organic % in State of the streaking [] Listed on Local Hydr [] Listed on National Hydr [] Other (explain in rem	ic Soils List ydric Soils List			
Unit Name: C3s Corvallis silt loam slightly saline Drainage Class: Somewhat poorly drained	Taxonomy: Fluvauqentic [] Field Observations mate				
Remarks					
Wetland Determination					
[] Hydrophytic Vegetation Present	[] This Data Point is a \	Wetland			

Data Form

[] Hydric Soils Present [] Wetland Hydrology Present

Remarks

Job Number: 0877.008.010.0310

APPENDIX B

Ravalli County Airport Wetland Delineation Report Photographs



Photo 1. View northwest of wetland W-1-03.



Photo 2. View east of upland associated with W-1-03.



Photo 3. View southwest of wetland W-2-03.

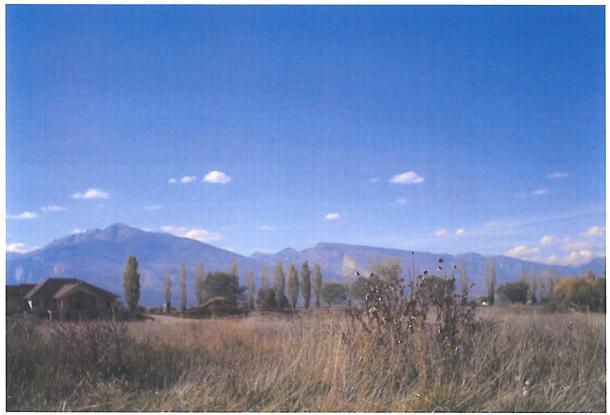


Photo 4. View northwest of upland associated with W-2-03.



Photo 5. View northeast at wetland W-3-03.

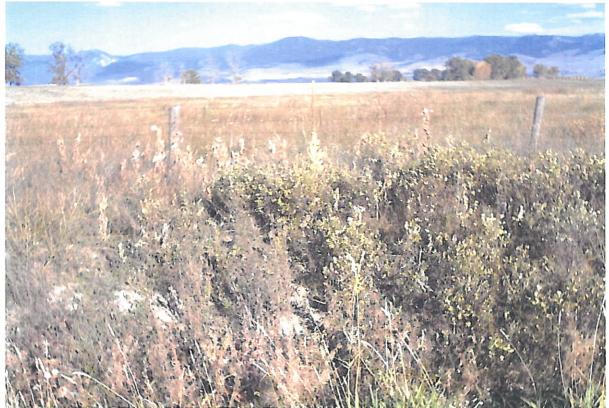


Photo 6. View east of upland area associated with W-3-03.



Photo 7. View east of W-4-03, Gird Creek.



Photo 8. View west of W-4-03 and associated upland vegetation.



Photo 9. View north at W-5-03 and associated upland vegetation.



Photo 10. View south of upland vegetation associated with W-6-03 and W-7-03.



Photo 11. View north of W-9-03 and transition to upland vegetation.



Photo 12. View west of W-10-03, wetland vegetation.



Photo 13. View northeast of upland vegetation associated with W-10-03.



Photo 14. View west of W-11-03, wetland vegetation.



Photo 15. View northeast of upland vegetation associated with W-12-03.



Photo 16. View southeast of upland vegetation associated with W-13-03.

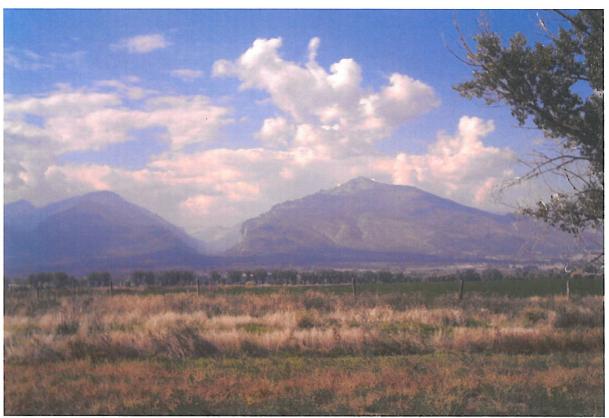


Photo 17. View west of upland vegetation associated with W-14-03.



Photo 18. View north of S-15-04 1, wetland data point.



Photo 19. View north of S-15-04 2, upland data point.



Photo 20. View west of S-16-04 1, wetland data point.



Photo 21. View north of S-16-04 2, upland data point.



Photo 22. View north of S-17-04 1, wetland data point.

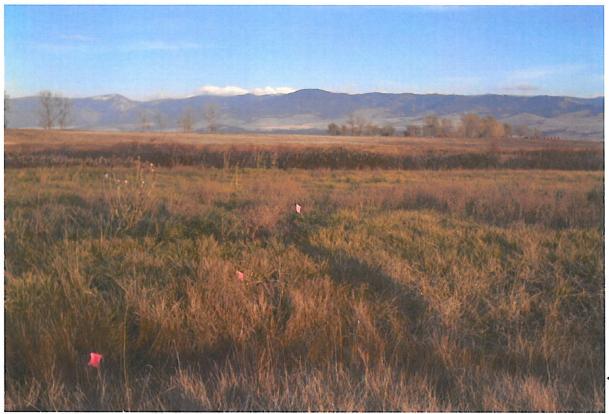


Photo 23. View east of S-17-04 2, upland data point.



Photo 24. View west of S-18-04 1, wetland data point.



Photo 25. View south of S-18-04 2, upland data point.



Photo 26. Ravalli County Airport overview of project area.

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U.S. ARMY CORPS OF ENGINEERS



HELENA REGULATORY OFFICE 10 WEST 15TH STREET, SUITE 2200 HELENA, MONTANA 59626

RECENTED AND 2 9 2005

REPLY TO ATTENTION OF: April 27. 2005

Helena Regulatory Office Phone (406) 441-1375 Fax (406) 441-1380

RE: Ravalli County Airpor

Ravalli County Airport – Jurisdiction Determination Corps File No. 200490554

Morrison-Maierle, Inc. Attn: Mr. Paul McGuire P.O. Box 1113 Bozeman, Montana 59771

Dear Mr. McGuire:

Reference is made to your request for a verification of wetland boundaries and a jurisdictional determination for the wetlands located within the Ravalli County Airport's proposed expansion area. The airport is located near Hamilton in Sections 20,29, Township 6 North, Range 20 West, Ravalli County, Montana.

Under the authority of Section 404 of the Clean Water Act, Department of the Army permits are required for the discharge of fill material into waters of the United States. Waters of the United States include the area below the ordinary high water mark of stream channels and lakes or ponds connected to the tributary system, and wetlands adjacent to these waters. In certain circumstances, isolated waters and man-made channels may also be considered waters of the United States and would be required to be evaluated on a case-by-case basis.

Based on the information provided and a subsequent field visit conducted on April 18, 2005 by Robert McInerney of our office, the site contained jurisdictional waters of the U.S. under the authority of Section 404 of the Clean Water Act. The enclosed Jurisdictional Determination (JD) form describes the extent of waters of the United States on the project site. This is an Approved Jurisdictional Determination, and it is valid for a period of 5 years from the date of this letter unless new information warrants revision of the determination before the expiration date. If you disagree with this jurisdictional determination, you have the right to appeal the decision. If you would like more information on the jurisdictional appeal process, contact this office.

From a further review of wetlands designated W-6-03, W-7-03, W-9-03, and W-10-03, it has been determined that they are jurisdictional based on being historic channels that meet the wetland criteria.

If you have any questions, please call Robert McInemey of this office at (406) 441-1375, and reference File No. 200490554.

XIVIVAL

Montana Program Manager

Enclosures

DISTRICT OFFICE: Omaha FILE NUMBER: 200490554

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Rationale for the Basis of Jurisdictional Determination (applies to any boxes checked above). If the jurisdictional water or wetland is not itself a navigable water of the United States, describe connection(s) to the downstream navigable waters. If B(1) or B(3) is used as the Basis of Jurisdiction, document navigability and/or interstate commerce connection (i.e., discuss site conditions, including why the waterbody is navigable and/or how the destruction of the waterbody could affect interstate or foreign commerce). If B(2, 4, 5 or 6) is used as the Basis of Jurisdiction, document the rationale used to make the determination. If B(7) is used as the Basis of Jurisdiction, document the rationale used to make adjacency determination: Gird Creek drains into the Bitterroot River which flows to the Clark Fork which in turns flows to Idaho and eventually into the Columbia River, a Section 10 navigable water.

La □	L changes in the character of soil	ndicated by: line along shore objects debris deposits (foreshore) arkings/characteristics
	Mean High Water Mark indicated by: ☐ survey to available datum; ☐ physical markings; ☐ vegetation lines/changes Wetland bounded.	in vegetaries as
\boxtimes	Wetland boundaries, as shown on the attached wetland delineation map and/or in a Morrison-Maierle, Inc.	delineation report prepared by:
Basis	sis For Not Asserting Jurisdiction: The reviewed area consists entirely of uplands. Unable to confirm the presence of waters in 33 CFR part 328(a)(1, 2, or 4-7). Headquarters declined to approve jurisdiction on the basis of 33 CFR part 328.3(a)(1, 2, or 4-7). Headquarters declined to approve jurisdiction on the basis of 33 CFR part 328.3(a)(1, 2, or 4-7). The Corps has made a case-specific determination that the following waters present United States: Waste treatment systems, including treatment ponds or lagoons, pursuant to Artificially irrigated areas, which would revert to upland if the irrigation ceal Artificial lakes and ponds created by excavating and/or diking dry land to certain water and which are used exclusively for such purposes as stock water rice growing. Artificial reflecting or swimming pools or other small ornamental bodies of by excavating and/or diking dry land to retain water for primarily aesthetic rewards water-filled depressions created in dry land incidental to construction activities the purpose of obtaining fill, sand, or gravel unless and until the construction abandoned and the resulting body of water meets the definition of waters of the purpose of obtaining body of water meets the definition of waters of the purpose of obtaining body of water meets the definition of waters of the purpose of obtaining body of water meets the definition of waters of the purpose of obtaining body of water meets the definition of waters of the purpose of obtaining body of water meets the definition of waters of the purpose of obtaining body of water meets the definition of waters of the purpose of obtaining body of water meets the definition of waters of the purpose of obtaining body of water meets the definition of waters of the purpose of obtaining body of water meets the definition of waters of the purpose of obtaining body of water meets the definition of waters of the purpose of obtaining body of water meets the definition of waters of the purpose of obtaining body of water meets the defini	33). It on the site are not Waters of the 33 CFR part 328.3. Issed. Issed.
	Non-tidal drainage or irrigation ditches excavated on dry land. Explain ration Other (explain):	ale:
Data Data	VIEWED FOR JURSIDICTIONAL DETERMINATION (mark all that apply): ataps, plans, plots or plat submitted by or on behalf of the applicant. ata sheets prepared/submitted by or on behalf of the applicant. This office concurs with the delineation report, dated February 2005, prepared by this office does not concur with the delineation report, dated prepared by the Corps. This office does not concur with the delineation report, dated prepared by the Corps props' navigable waters' studies: S. Geological Survey Hydrologic Atlas: S. Geological Survey 7.5 Minute Topographic maps: S. Geological Survey 7.5 Minute Historic quadrangles: S. Geological Survey 15 Minute Historic quadrangles: DA Natural Resources Conservation Service Soil Survey: tional wetlands inventory maps: te/Local wetland inventory maps: MA/FIRM maps (Map Name & Date): -year Floodplain Elevation is: (NGVD) ial Photographs (Name & Date): er photographs (Date): vanced Identification Wetland maps: visit/determination conducted on: April 18, 2005	(company): Morrison-Majorla
	licable/supporting case law: er information (please specify):	

Wetlands are identified and delineated using the methods and criteria established in the Corps Wetland Delineation Manual (87 Manual) (i.e., occurrence of hydrophytic vegetation, hydric soils and wetland hydrology).

²The term "adjacent" means bordering, contiguous, or neighboring. Wetlands separated from other waters of the U.S. by man-made dikes or barriers, natural river berms, beach dunes, and the like are also adjacent.